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EMILY PITCHFORD
VANITY

PHOTO-ERA

The American Journal of Photography

VOL. XVIII JUNE, 1907 No. 6

WILFRED C. DE SAIN, BEY THE SHEPHERD

ENLARGING WITH THE LANTERN

C. H. CLAUDY

WHAT is the greatest value of the enlargement to the pictorialist? It is surely not size alone, although anything good at all is more impressive, makes a wider appeal and is surely more dignified large than small. But the enlargement is more than a gain in size. It permits any part of the negative to be made into a picture of reasonable dimensions; the part selected may be half an inch by an inch, and utterly inconspicuous in the original print, but enlarged to a 5 x 7, it may have a beauty of its own far beyond the original and entire photograph.

Moreover, by picking out small portions of the background and making enlargements, a better perspective is secured than by using a negative made of those portions, in which they fill the entire plate. Other things being equal, the further away from an object you are in taking a picture the more pleasing the perspective, which is why telephoto pictures have so much of an indefinable charm about them.

Again, a sharp negative, with absolutely no planes differentiated one from another, can be so improved by enlargement that it appears quite a different picture. There is no process in which "dodging" is so easily accomplished as

in bromide enlarging *with the lantern;* in the camera there is no opportunity, but with a projected image portions may be shaded, portions accentuated, and a clever workman can completely change the tonal scale of the picture by such work. Many use few other screens than their hands, playing on the image in the air almost as a pianist plays on the keyboard, and getting a softness and diffusion about the dodging which completely obliterates it, and makes the result tell no tale of the why and how. With the possible exception of the enlarged negative and much hand-work, there is absolutely no process which lends itself so readily to pictorial work as the bromide outfit, and none whatever that comprises within itself so many educational possibilities as the lantern, with its double requirements of skill in handling and its aid in picking out unsuspected beauties in hosts of negatives which otherwise have had their possibilities exhausted years ago. The following hints on the choice and technical use of a lantern, therefore, are offered in the hope that pictorial workers can see through the veil of technic to the vista of pictorial possibility opened up beyond.

In times gone by, many writers, myself among the number, have suggested various schemes by which direct enlarging can be done upon bromide paper without the use of the lantern and the more or less expensive condensing-lenses. Let us start fair and square in this article with the personal confession of this particular writer that he spoke without enough light upon the subject. His apparatus and all the other pieces of apparatus, designed and advocated for the same purpose, have the same trouble — they do not give enough light! If the light is sufficient in quantity, it is poorly distributed. With the single exception of daylight enlarging-apparatus, which uses either a large and properly adjusted reflector or strikes directly against the sky, no apparatus known to the writer will do the work of the lantern. And any daylight apparatus, no matter how perfect, even if it includes condensers, is inferior to the lantern on account of fluctuations in the degree of light used. These fluctuations may be from day to day, from hour to hour or from minute to minute, making an accurate judgment of exposure almost impossible, where the worker takes up enlarging only occasionally.

A good lantern of moderate size, say for 4 x 5 plates, can be obtained for thirty dollars. This is about half what is usually paid for a good lens and shutter of average size. Yet it is safe to say that any one who cares for enlarging at all would find more pleasure and profit in the use of the lantern than in owning a fine lens which half the time is incorrectly used, and the relatively short focus of which may make it of little practical value to the owner.

There are certain points in the purchase of a lantern which it may be well to mention. The light-box — that part of the apparatus which holds the illuminating-apparatus and keeps the rays of light from spreading where they are not wanted — should be sufficiently ample in size to allow various kinds of lights to be installed. A contrary argument would be to the effect that the purchaser knows beforehand what he wants, and if the box will contain his style and choice, it need be no larger. But that this is a fallacy, is easily demonstrated

by the experience of an acquaintance, who purchased a lantern fitted with electric light, found it too slow for his work, changed to Welsbach, found that too slow, and finally adopted acetylene. Had his light-box been adapted to electricity only, he could not have made the change. It does not cost any more, and is a point worth remembering.

No lantern should be purchased with the idea of fitting to it a lens already owned, unless the lantern itself has a rack and pinion focusing-device, or the lens itself has a focusing-barrel. The fine adjustments in focusing an enlargement are all made with a rack and pinion, and any coarser movement will be found most impractical. For the same reason, do not attempt to fit an enlarging-lantern with a slow lens. It is better to use a poor lens which has a large relative opening than a good lens with a small relative opening. The large-opening lens allows easy focusing without eye-strain, and can be stopped down for the exposure. The good lens of smaller opening may do the work a little quicker than the stopped-down poorer lens, but focusing is so difficult as to make the operation an exertion instead of a pleasure. Again, it really matters very little whether an enlargement takes ten seconds or one hundred seconds — most users of a lantern are not so pressed for time, and do not need or wish to produce fifty enlargements per hour.

The condensers ought to be of a diameter a little larger than the diagonal of the plate. To arrive at the diagonal of a plate, square each of its two dimensions, add the squares, and extract the square root. Therefore, six-inch condensers are not large enough for a 4 x 5 plate, although not infrequently furnished for that size. Six and one-half inches is none too big, although slightly larger than the diagonal of the plate. But it must be recalled that the negative does not lie in contact with the condensers, but is slightly in front of them, and that they must be large enough to spread past the angle thus created.

That lantern is the better which has the place for the negative open on all sides, so that a negative larger than is listed may be inserted and an enlargement made from a part of it. No lantern which has any paint or enamel about it should be considered for a moment.

Now as to the method of using the lantern; a few points stand out in the mind of the man who has solved the problems one by one as they came up, without help and without knowledge. The first and most important of all is the adjustment of the relative positions of the condensers, the light and the projection-lens — and, incidentally, the screen on which the enlargement is made.

Condensers are lenses of enormous *f* value, and without corrections. Their function is to collect light from the source and condense it into a conical beam, the point of which will rest in the optical center of the projection-lens. This is the theory. As a matter of fact, the point of the cone is very blunt and poorly defined, the real image cast by the condensers being distorted and blurred; so that the projection-lens has a latitude of movement of, perhaps, ten per cent of its distance from the negative, without materially altering the ***quality*** of the image-circle cast on the screen. But alterations in the size of enlargements re-

MRS. W. W. PEARCE SECRETS

quire alterations in the distance between projection-lens and plate. This alteration, if of much magnitude, throws the projection-lens forward or back of the indeterminate point of the condensed light-cone, and the image-circle of light is consequently degraded and uneven and the enlargement suffers in consequence. So, after the relation is once adjusted, do not materially alter the size of the enlargement wthout readjusting the relation between condensers and light. In all good lanterns this adjustment is effected by moving the light and not the condensers, for obvious reasons. If it is the condensers which are moved, it means that the projection-lens and the negative must be moved again, which is an unnecessary hardship and takes time.

The proper manner of adjusting the relation of condenser, light, projection-lens and screen is as follows:

Insert the negative, and with a movement of the projection-lens and screen, get a sharp image of the size wanted. Then remove the negative and note the image-circle thrown on the screen. It should be sharp at the edges and of one

SWEET BROTHERS
A NOVEMBER MORNING
THIRD AMERICAN PHOTOGRAPHIC SALON

intensity throughout. If it is not, move the light towards, then away from, the condensers, until an even illumination is secured. If the edges of the circle of light become sharp in one position, but the light itself is uneven, the trouble is with the vertical position of the lamp, or its side-to-side movement. The forward-and-back movement should be clamped where the edges show sharpest and the light evened by raising and lowering and side-to-side movement of the light-source. Very little movement will be required, in all probability.

Having secured an even illumination, enlarging is in order, unless the difference in temperature in the room and the light-box be sufficiently extreme to cause moisture to settle on the face of the condenser away from the light. If this is indicated, as it will be by a shadow forming in the light-circle, remove the condensers and reverse, putting the moist side next the lamp. The warmth will dissipate the moisture and will not leave a mark, as will wiping unless very carefully done.

It is a common practice to make enlargements with the sensitive paper held in a printing-frame, behind glass. Focusing is done on a white sheet of paper behind glass in another frame, the two being transposed with every fresh enlargement. Particular attention should be paid to having the glasses in both frames of uniform thickness, particularly when making enlargements but slightly larger than the original, as very slight changes of position mean out-of-focus results. When very big enlargements are being made, this is of slight importance, particularly as very few enlargements greater than 11 x 14 in size are made in printing-frames.

It is of comparatively minor importance that the projection-lens be clean, compared to the very major importance of having condensing-lenses spotless. It is perfectly feasible to put small bits of paper on the front of the projection-lens, and make perfect enlargements, but try sticking some on the condensing-lens! The result will be a shadow in the light-circle which will show as a light spot in the print. Nothing in this should be construed as stating that a projection-lens is better dirty. Only if you have merely a limited desire and ambition for cleanliness, direct it to the condensers first and to the projection-lens afterward. For the same reason, the back of every negative used should be carefully cleaned. A scratch in the back of the negative, which sometimes makes a mean mark, can be almost obliterated with a trace of oil (preferably oil of cedar, which has almost identically the same refractive index as glass), Canada balsam, vaseline or machine oil, mentioned in the order of their desirability.

Do all focusing with the lens wide open and then stop down, if sharp enlargements are desired. For pictorial diffusion of focus, every print is of course a law unto itself. It is not possible to obtain as sharp definition by focusing with the lens stopped down as by focusing wide open and then stopping down.

As far as possible center the enlargement to the lantern by movements of the easel, rather than by movements of the lantern on an angle, as by such means the parallelism necessary to an equal degree of sharpness or diffusion throughout is retained between plate and paper.

TRANSPARENT SPOTS ON NEGATIVES, AND HOW TO TREAT THEM

MADISON PHILLIPS

ONE of the petty annoyances of photography, occasionally met with, may be found in the transparent spots on negatives sometimes spoken of as pinholes. Painstaking workers are not often troubled by them, and for that very reason usually know so little about their treatment that the methods of spotting employed are worse than the defect itself. It is much wiser not to spot at all than to do it badly. The matter is so simple, however, that every photographer, professional or amateur, should make it a point to be able to do it nicely. Moreover, the causes of these spots should be known, that they may be avoided.

As a beginning, let us consider, briefly, some of the causes of these transparent spots. They may be due to any one of a number of reasons, but not more than three are important or common of occurrence, therefore the paragraphs which follow will be devoted to them only.

First of all may be mentioned those spots caused by the formation of air-bells on the surface of a plate during development. Defects of this sort are characterized by their small size, absolutely circular shape and clearly defined edges, being transparent if the air-bells remained throughout development, or of a lighter tone than adjoining portions of the plate if they were seen and removed before development was completed. With a reasonable amount of care these troublesome defects will not occur. To obviate them, it is only necessary to use boiled or distilled water, free from organic matter, in compounding the developer, to make sure that the developer covers the plate at one quick sweep and at once to swab over the film-surface gently with a bit of absorbent cotton to remove any air-bells that may have formed.

Then may be cited those spots resulting from dust settling on the plate during exposure and preventing light action, or during development and restraining the reducing-agent in the proper performance of its work. These troubles may result in tiny round pinholes or larger spots of irregular size and shape. Much larger angular-shaped spots are caused by undissolved crystals lying on the film, or by the scum which always forms on a developer which has been exposed for any length of time before using. In each of these cases the spots are small transparent areas on the gelatine emulsion. All this teaches us that the interior of the camera and the plate-holders should be dusted out before use, and that trays, washing and fixing-boxes should be kept scrupulously clean and free from dust. The plates also should be carefully dusted with a camel's-hair brush before insertion in the plate-holders, as well as just before immersion in the developer. Crystals used in compounding the developer should be completely dissolved, and it will be found advisable not to expose the developer to the open air for any great length of time before it is wanted. Further than this, it will be well to filter it before using.

Finally, another sort of spots may be noted, less common than their predecessors, due to lack of proper supervision at the plate-factory, resulting in minute circular areas of clear glass, free from any of the coating of the plate. These faults may be the outcome of defective coating, dust or bubbles in the emulsion and ruptures, which, it is probable, are caused by gases being liberated while the emulsion is being cooked, during development or the drying of the negative in unusually hot weather. These ruptures are the most difficult of all to remedy on account of the increased density around their edges. Fortunately, however, dry-plates are now so carefully inspected before packing that the defects mentioned in this paragraph are almost unknown to many photographers.

Two methods of remedying the evils enumerated above are open to us:

First, we may spot out each defect so that a print from the negative gives a white instead of a black spot, and then with water-colors match the surrounding tones of the print. Both the negative and each print must be treated separately, but for the unskilled amateur, this mode of treatment is better to begin with, especially if papers of rough surface are used.

The second method is to retouch the defects with a pencil until they assume the same printing-density as their surroundings. This requires more skill, but as prints taken from negatives so treated require no work upon them whatever, it is to be preferred, especially if a large number of copies are to be taken.

For pursuing the first method, any spotting-medium, such as ordinary opaque, India ink or sepia is suitable, since we desire only an opaque spot. A fine sable brush and a little dish of water will be needed, and a retouching-desk will be found a comfort. If the worker does not have one of the commercial variety, a satisfactory substitute may be improvised by leaning a piece of plate glass at an angle of about 45° against two heavy books, one at each upper corner, a sheet of white paper laid below acting as a reflector.

To stop out a spot, moisten the sable brush in water and charge it with color of sufficient density. Twirl it on a piece of paper, and, when the point thus obtained seems nearly dry, hold the brush perpendicular to the negative and touch the center of the spot with the point of the brush. If the spot is a small one, the color will cover it at once. When the spots are larger, they should be outlined and the center filled afterwards. Always be careful that the pigment in the brush tends to dry rather than to flow before applying it to the negative.

It now becomes necessary to treat the white spot on the print caused by spotting the negative. This operation is practically the same as spotting the negative, except that the tone of the print must be matched. In doing this, it is surprising how little pigment is necessary, especially in faces, the sky or like places in the high-lights, where the slightest trace of color is sufficient. It will be advisable, therefore, to try the color carefully on a piece of white paper before applying it to the print. Such work should not be attempted except by daylight, as spotting done by artificial light is almost certain to be unsatisfactory.

While one with a good eye for color can readily match almost any color and tone, the unskilled may have difficulties; and then, too, prints toned by certain

JOHN CHISLETT WADING THE STREAM

THIRD AMERICAN PHOTOGRAPHIC SALON

formulæ possess colors almost impossible to imitate. There are, however, methods ensuring a greater measure of success. If carbon prints are to be treated, a few trimmings of unexposed tissue, the same color as the print, should be placed in cold water to soften. When this is accomplished, dissolve the gelatine and pigment in quite a quantity of hot water, allow to stand for a day or two, when the pigment will settle to the bottom of the dish and the useless clear water containing the gelatine may be decanted off. The sediment thus obtained furnishes the ideal spotting-medium for prints made on the same tissue. Bromide and gaslight prints, especially if toned to various colors, may be treated in the same manner as carbon. The paper should be developed black, and then toned like the print before dissolving in hot water.

Matching the surface of the paper must also occupy our attention. This is a simple matter if papers of rough texture are used, but any trace of water-color on glossy prints is noticeable. Probably the easiest method of preventing this is to moisten the brush in gum-arabic solution before taking any color.

If only a few prints are desired from a negative requiring treatment for transparent defects, the method just described, which necessitates spotting both

DR. A. R. BENEDICT IN WIND AND RAIN

negative and print, is quite satisfactory. The professional, however, or the advanced amateur, who goes into things on a larger scale and may desire to print a considerable number of copies, will find this procedure too tedious and wasteful of his valuable time. To avoid all work on the print the only course left open is to retouch the spot with a pencil.

It is useless to attempt retouching without the proper materials, although these are very few and inexpensive, for absolute failure will result. A retouching-desk of commercial or amateur design, as already suggested, is a convenience and almost a necessity. A bottle of retouching-medium, procurable at any supply-store, is also needed to give tooth for the pencil, which must be intended for the purpose and nicely pointed. An H lead is about right for spotting and should be brought to a fine, tapering point, nearly half an inch in length, by twirling it first on emery-paper and finally on drawing-paper.

THIRD
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SALON

CHARLES TRACY HOMEWARD AT NIGHT

Begin by applying the retouching-medium. A tiny drop taken from the cork of the bottle on the forefinger is all that is needed. This should be applied to the spot and worked around in a circular motion until tacky, when it dries almost immediately, leaving the desired tooth. One touch of the pencil is ample treatment for removing small pinholes due to dust or minute air-bubbles.

Large spots due to dust or air-bubbles require more penciling, as their entire area must be darkened with lead until it matches adjacent areas in tone. A number of strokes of the pencil may be adopted; a stipple of little dots together is good, and shading with straight lines is also excellent. One must use his best judgment and fit the stroke to the character of the work in hand. In most cases, however, a series of small spirals drawn with a slight pressure of the pencil is to be preferred. If mistakes are made with the pencil, the forefinger, moistened

in turpentine, will remove both lead and medium. After applying fresh medium, the work may be attempted again. Do not forget that there is a limit to the amount of lead which the medium will take. Spots will rarely require a second pencilling, unless in very dense portions of the negative. In case they do, it is necessary to varnish the plate to hold what has already been done, after which medium can be applied as at first, and the retouching continued.

A good varnish for cold application is as follows: sandarac, one-half ounce; chloroform, three ounces. Make sure that the negative is free from dirt and dust and then pour a large pool of varnish onto the center of the negative, allowing it to spread as much as possible. Gently tilt the plate so that the varnish may flow from one side to the other, without remaining on the edges. One corner should be left bare, and when the rest of the negative is covered, this corner should be placed to drain inside a large glass funnel which has been set into a wide-mouthed bottle. When the varnish has ceased to drip, the negative may be set away to dry. If it becomes desirable to remove the varnish from the negative, soak in alcohol for ten minutes and then swab off gently with a tuft of cotton moistened in alcohol.

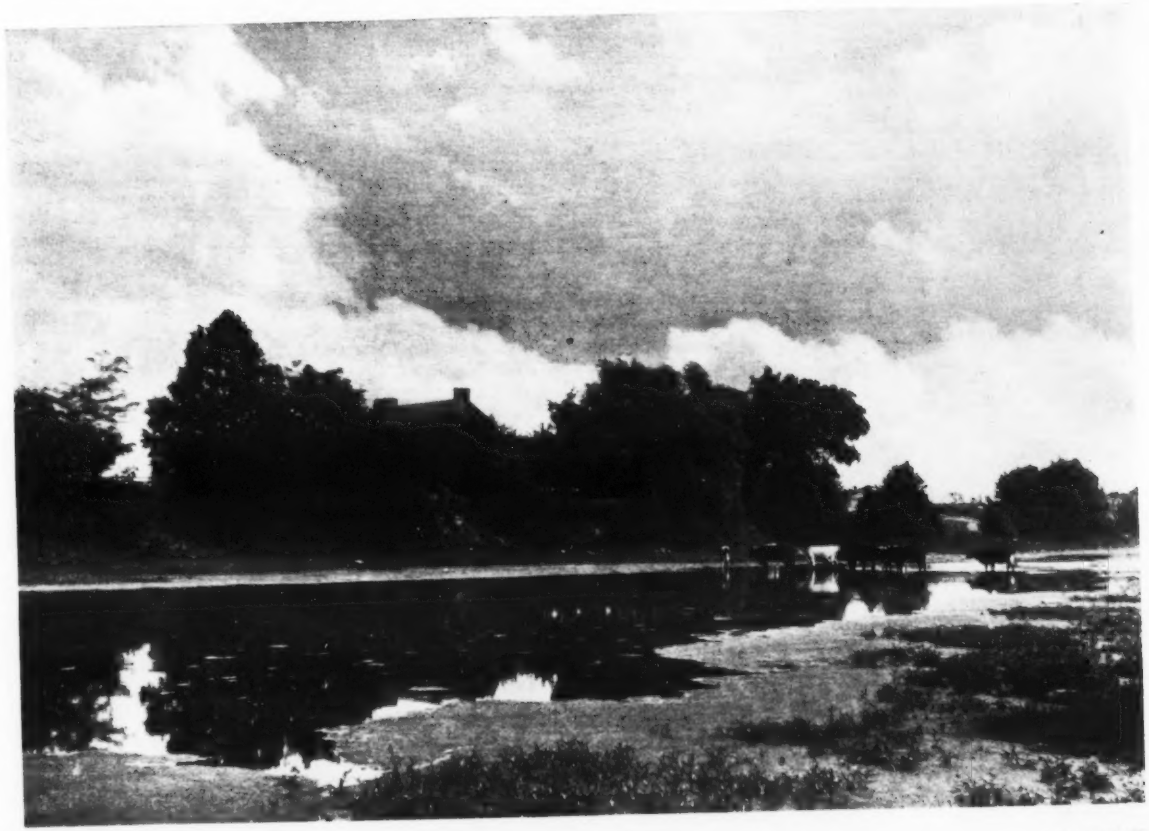
Spots of clear glass due to faulty coating or hot-weather troubles, although infrequent in occurrence, require more complex treatment than the foregoing, unless they occur in places that are desired to print out white, in which case they can easily be filled with opaque. Clear glass will not take the pencil, so it must be covered. Soak a small piece of gelatine in cold water until limp, dissolve it with a few drops of hot water, and while still warm apply a drop to cover the bare glass and the edges of the spot. When this has dried, the spot may be treated with the pencil, as described above.

FIRELIGHT-EFFECTS BY DAYLIGHT

HENRY ESSENHIGH CORKE

THE usual method of placing magnesium or a flash powder of some description in an ordinary grate for producing firelight-effects is always attended by a certain amount of smoke and dirt. Great care must also be taken to keep the smoke and flash well in the fire, so as not to have a flare in that part of the print. But perhaps the greatest drawback of all is that the actual effect of the lighting cannot be carefully studied before the exposure is made. Even if an experimental flash is used beforehand, it is so sudden that no time is allowed to see that no light strikes any portion of the sitter or is reflected from any accessory that will catch the eye undesirably, and that if noticed in time might have been easily moved or turned at a different angle, so as not to have caught the light.

On the other hand, when daylight is the illuminant the light is continuous and steady, and gives one time to study it carefully and to make alterations until exactly the effect desired is seen to be obtained.



GEORGE A. CUSTER

THE MIAMI

Although as a professional photographer with a studio, I naturally used it for the production of most of these firelight-effects, there are none that cannot be quite easily done in an ordinary room, as I shall show later on.

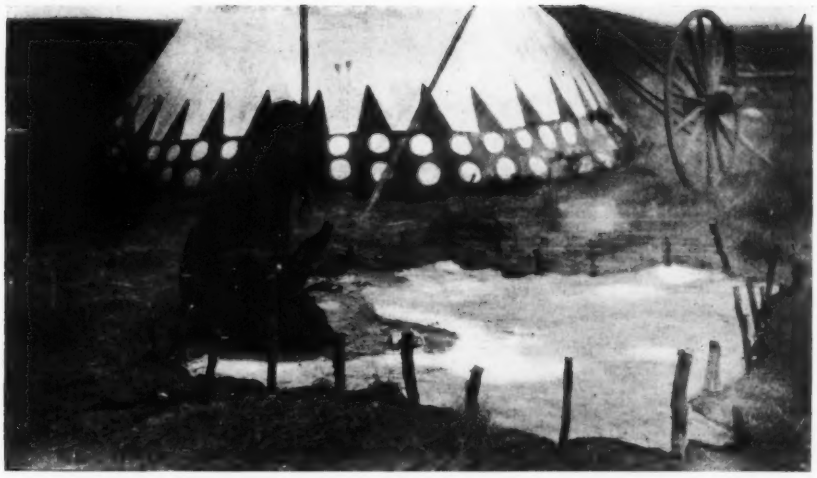
In the case of those taken in the studio, the sitter was posed on a raised platform, so as to be on a level with the bottom of the window, in this case of ground-glass, and about two feet from the floor. The sitter should be as near the source of light as possible, so that the lighting may be rather concentrated. All the dark blinds are then drawn, leaving only a patch open about two feet square, just in front of the sitter, where the fire is supposed to be. A fender and hearth-rug are then placed in front of the light on the floor. In some cases it may be found convenient to place a mirror in the "fireplace," so as to give an extra amount of reflected light upwards on to the face of the sitter. A small strip of white paper may be placed inside the fender to look like the white, brightly-lighted hearth. It is desirable to use a dark background, composed of dark curtains; these should not be allowed to hang in folds, but should be stretched tightly, or awkward streaks of high-light will possibly show on the folds.

Exactly the same effect can be obtained in the same way in an ordinary room, and at an ordinary window. All that is necessary is to block up the window with brown paper, from the top downwards, as may be required, so as to give an opening of suitable size as low as can conveniently be managed. The sitter is then raised to a level with the opening, using a large dining-table or a board supported on trestles for the purpose. The other arrangements are the same as just described.

Alternatively, if French windows are available, they may be used, and there is then no need for a platform. The sitter is posed on the floor, and a large white sheet thrown down outside the windows will be found to throw a bright reflected light into the room. If by any chance the ground outside should be covered with snow, the same effect is secured without the sheet.

The exposure should err on the underside, as a rather hard negative is best suited for this class of subject. Of course, the actual exposure will vary according to many prevailing circumstances, but it may be some guide to say that with about two feet of ground-glass, with the sitter about two or three feet from it, using a lens working at *f*/4.5, about two and a half seconds will be about right with a fast plate. In development, the high-lights should be allowed to attain sufficient density, and no thought need be taken of the shadows. I should also advise a pyro-soda developer, as with it the high-lights are not so likely to clog up as when hydroquinone or such developers are used. The prints may be made in carbon, and transferred to an orange-colored paper, or by any other process that is preferred. In the latter case, P. O. P., bromide, gaslight or platinum prints may be stained to produce the color-effect of the firelight.

Those who have a fancy for striking and effective portraits a little out of the ordinary run will do well to give this plan a trial. They will find that all the bother of smoke, fumes and flare are done away with, and that they can study and arrange the effect they want with ease and deliberation.— *Photography.*



H. F. ROBINSON — PIEGAN — TANNING HIDE

A NEGLECTED FIELD

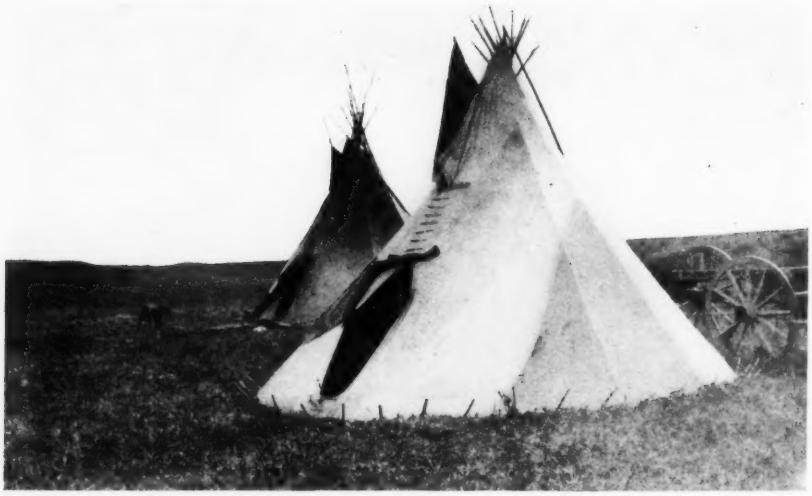
H. F. ROBINSON

SCATTERED over the United States are one hundred and twenty-eight reservations set apart for the Indians, covering an area of approximately 92,816 square miles, and varying in size from one containing 169 acres to one containing nine and a half million — that of the Navajo.

These reservations contain little more than 284,000 people, or, excluding the five civilized tribes now citizens of Oklahoma, 192,442 souls of varying degrees of civilization, from those fully civilized and educated to the absolute savage.

Once free and independent, and by right of possession the owners of the entire area covered by this country, they have been, by the encroachment of civilization and the rapacity of the white man, pushed back past the "frontier" until there is no longer a frontier, and they are now limited to certain tracts of land which the white race is still reaching after, not satisfied until it takes the last remaining acre from them.

For years there have been sporadic attempts to record that which is picturesque in the Indian and his mode of living, but, with few exceptions, little has been accomplished by these individual efforts, and this mine of artistic material has been ignored, and passed by, until it is now too late to record many of the most characteristic scenes and customs. It is true that there is still a wealth of the picturesque among these people, but its character has been changed, and it is now still more rapidly being transformed.



H. F. ROBINSON PIEGAN

The Indian of the early days — the days of the frontier, of the buffalo, of the Indian wars — has passed away; gone with the old hunter and trapper and the game they hunted, never to return. He is no longer robed in buckskin and fur, with his decoration of beadwork or feather, porcupine-quill and paint. To-day he wears the clothing of the white man, wholly or in part.

The old dress is now used only for exhibition purposes with some circus, the "Wild West" show, or the occasional ceremonial where some of the men and women of the tribe keep up the outward show of the past and go through the dances and old observances.

Education and new and different environment are changing the method of living, of dress and thought; and if we are to believe the ethnologists, even the physical characteristics are being modified.

This is the transition period. While the older people cling to the old manners and customs, the education of the younger generation, both by its attendance at schools and that other education which comes from contact with the white race, is having its influence. With a total number still on reservations, excluding Alaska, of fewer than two hundred thousand people, and an average daily attendance at school during the past year of over twenty-five thousand (25,464) children, the leaven of civilization is rapidly working, and will develop still faster in the future.

The change from the life of the hunter, whose prowess in procuring game gave himself and family their entire means of life, to that of the husbandman, the cattleman and the shepherd has had its greatest influence. Agriculture de-

H. F. ROBINSON MESCALERO MOTHER AND CHILD

mands his residence where he may attend his growing crops; hence the substitution of the permanent house for the tepee. It matters not that he still clings to the tepee and lives in it a portion of the year, the leaven is working and the tepee will disappear. Indeed, the white man's tent is superseding the tepee because of its lightness and portability. In the old days the tepee was made of tanned hides, and, as it would last for years, it was, more often than not, decorated with a profusion of paintings and other ornamentation. To-day it is made of cloth — canvas, when the owner can afford to purchase it, but often of common cotton cloth — and because of its perishable character it is now seldom decorated as of old. The use of the wagon has almost entirely done away with that of the *travois* and even with the pack-animal. The ease with which the Indian can buy cloth and ready-made clothing from the trader, together with the scarcity of game, has done away almost entirely with the use of buckskin and fur garments. The elimination of the Indian as a ward of the government, and his absorption as a unit in the body-politic of the United States (ninety-two

thousand came in when Oklahoma was admitted as a State), will do away with the last remnant of his old savage picturesqueness, and soon he will be no more picturesque than the rest of our eighty millions of inhabitants.

Still, there is abundant material for the artist, be he painter, sculptor or photographer. The love and use of bright colors is a large factor in the picturesqueness of the Indian; this the painter can seize and utilize, but it is denied the photographer, working in monochrome.

There are a few artists who are doing their utmost to preserve for future generations the Indian type and his environment. Notably, the work of Burbank, Remington and Sharp, painters, and Curtis, photographer of the highest artistic quality, will be of inestimable value in the years to come. Burbank and Curtis are preserving the Indian type, confining themselves almost exclusively to portraiture. Remington, on the other hand, is recording the life and environment. Sharp is doing both. But the field is so large, the change is so rapid, and the workers so few that the little accomplished will be but a drop in the bucket of what might have been saved.

The Indian has a distinct individuality, a personality different from any other race of man; he is an Indian, a red man; he knows it and is proud of it. He may sometimes desire to emulate the better educated and wealthier white man, but never does he wish to be one; never is he ashamed of his Indian blood.

True to his savage instinct, his suspicion of the white man, all too well founded, and his conservativeness, he generally objects to being painted or photographed; and often when he has no other objection, he declines unless he is paid for posing — and well paid, too.

If more of our photographers who take annual outings with their cameras would make some one of the many Indian Reservations their objective-point, and the recording of the Indian life their object, the material found there would well repay them. To be sure, the most accessible reservations have perhaps the least material, but any of them would repay the effort.

H. F. ROBINSON HAULING WATER ON TRAVOIS

COMBINATION-PRINTING IN ENLARGEMENTS

C. WINTHROPE SOMERVILLE, F. R. P. S.

ALTHOUGH the purposes for which combination-printing is used are almost wholly pictorial, it should be well understood that this article is not written from the artist's point of view. Balance, composition, lines, masses, etc. — these must be secured by the worker; but having obtained them in the several negatives, we shall endeavor to show some economical and efficient methods for combining the component parts which go to form the compound print. Therefore, when such topics as the lighting and position of clouds in relation to landscapes, etc., are mentioned, this is purely from the technical, manipulative aspect.

First Considerations.— Combination-printing in enlarging is not really a difficult matter, providing forethought, care and extreme delicacy in handling be maintained.

It must be remembered that the printing will be invisible till developed, so that every consideration must be given to the densities of the various negatives.

Prints of these should be made beforehand in small size, and in their production development must in all cases be carried as far as it will go. The chief preliminary consideration is whether any of the negatives will allow of such an exposure that the printing may be developed right out; because, if not, the exposure as well as the development has to be manipulated, and this makes the work rather more complex.

A Simple Case.— Simple combination-printing, such as the addition of clouds to a landscape or seascape with an even horizontal line, presents no difficulties. The blocking-out of the sky enables us to give any required exposure to the landscape, which, when developed, indicates the horizon-line, thereby allowing of easy and correct adjustment for the second printing. But when a blank space has to be left for the inclusion of a figure or other factor in the landscape we have to go more carefully to work.

Introduction of Figures.— Careful judgment must be exercised in such matters as the size of figures, position and lighting of clouds, their height and distance, etc., in relation to the rest of the picture.

If the exact position of a figure cannot be ascertained at the time of the exposure of the plate, it should be determined afterwards by trial. By far the best method of doing this is to make an initial and experimental enlargement of the size intended for the final print without any clouds, figures, etc. Now print the figure or other adjunct, cut it out and stick it on the enlargement lightly with paste, and view it at various distances. If it has to go in a certain spot then it must be made to the correct size. Pinning the big print on the enlarging-screen and projecting the figure on to it will greatly help us in determining its proper size. A still better plan is to block out the rest of the figure negative, and make a positive of this and project it on to the big print. The cut-out figure is eventually used as a mask when the final print is made.

Clouds.— The position of clouds is best ascertained in the same way, although practice soon enables us to place the clouds direct from the negative on to the final print without making a preliminary positive for guidance. In landscapes and seascapes the correct or similar lighting of the clouds must be strictly observed. Of equal importance is the position of the clouds in relation to correct perspective. It must be noted whether the horizon-line of the landscape negative is in practically the same distance-plane as that on the cloud negative; for it is a common error with beginners to photograph a well-defined cloud high up in the sky and place it lower down in the combined print in order to obtain a more brilliant and powerful effect. Clouds on the horizon are the weakest in intensity, and must be kept so. It is preferable when putting in skies to soften slightly by over-exposure; otherwise there is a tendency to produce the effect of their falling on to the landscape or coming in front of the horizon. Where dark masses of sky prevail the landscape should be more fully exposed in corresponding parts, or the necessary effect cannot be produced during development.

Apparatus.— The work in combination-printing is very much facilitated with suitable apparatus. An enlarging-*lantern* is practically a necessity. An enlarging-*camera* is perhaps the most inconvenient. For the benefit of the beginner we may explain that an enlarging-lantern is an apparatus in which the negative (being illuminated in a suitable manner) is projected by the lens on to a screen outside, or separate from, the camera part. In an enlarging-camera the screen is not separated, but is a part of the apparatus, all being contained on the same baseboard. Thus, with a lantern the operator can get between the lens and the screen to manipulate the paper on the screen. This is not possible to any practical extent with an enlarging-camera. This difference is of the utmost importance in combination-work. The screen preferably should be of wood or such material that the paper may be *pinned* to it. This is very necessary, because with several printings it is very unlikely that the paper will be placed twice in the same position.

Glass cannot be used for keeping the paper flat against the screen, as the print will be wet after the first printing.

Red and yellow glass caps, or, preferably, swinging screens, are necessary for the purpose of adjusting the paper during all printings after the first. (On our own lantern, the glass is hinged on to the lens-board in such a manner that it swings round and covers the lens aperture. This is extremely convenient, as it is practically instantaneous and without vibration.) A lens-board with horizontal and vertical adjustment is invaluable in combination-work, facilitating registration in second, third and fourth printings.

As regards the pictorial point of view, we must mention the risk of combining negatives made with lenses of different foci, noting in passing that the perspective can be altered to a great extent by first focusing sharply on the screen at full aperture, and then racking the lens in or out as required (thereby putting the image out of focus), and stopping down till sufficient definition is obtained.

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STUDY OF HEAD

Durability of Bromide Paper.— Bromide paper, with ordinary careful handling, is an exceedingly durable printing-medium. It is easily possible to make as many as eight printings, with development between each one, on the same piece of paper, without any fear of deterioration of the emulsion, or staining.

Continued experience has convinced us that the sensitiveness of the paper is but very slightly diminished with repeated and prolonged immersion in suitable developers; so that it is quite safe to give the same exposure to a wet print that has previously been ascertained on a dry trial-piece.

Now, as the process of combination-printing about to be described is on the system of exposing, developing, re-exposing and developing, for the second and third printings and so on, some consideration must be given to the most suitable developer, with regard to non-staining properties, etc.

Development.— Experience shows that a combination of metol and hydroquinone possesses advantages far beyond any other developer. With reasonable dilution a print may be immersed for several hours without deterioration, both re-agents being of an extremely clean-working nature.

In hydroquinone we have one of the hardest of developing re-agents, and in metol one of the softest. A judicious combination of the two (which may be modified with great facility according to our requirements) gives us a great range of power.

Stains.— Stains on bromide paper will not occur if three conditions be observed:

1. The print is not left too long during development without being rocked.
2. The print is not left exposed to the air while any of the developer remains in it.
3. The print is kept covered with solution, or rocked for at least fifteen seconds after placing in the fixing-solution.

Thus 1 and 2 imply the advisability of using a comparatively large volume of developer; *e.g.*, not less than four ounces in a 15 in. x 12 in. dish.

The following is a good developer for bromide work:

Normal Solution

Metol	100 grains
Hydroquinone	50 "
Sulphite of soda	3 ounces
Carbonate of potash	1½ "
Bromide of potassium	10 grains
Water	80 ounces

Exposure, Development, etc.— On no account must the beginner have internal qualms as to whether it is worth while trying to do anything in the work, owing to the difficulty here and the uncertainty there, because there is no difficulty whatever if system in the manipulation be observed.

In order to make the description as clear as possible, let us deal with each case separately.

Case 1. Two printings.

Where the first printing cannot be developed right out.

Ascertain by trial the exposure required to give the desired effect when development is carried as far as ever it will go with a *normal solution*. If the negative is of such quality as to allow of this, well and good; we can expose our large print.

If the negative is such that the shadows are too dense before the high-lights are sufficiently detailed, we must over-expose and stop development at the desired stage. The developer must be diluted to half strength. This will produce detail in the high-lights before too much density has accumulated in the shadows. Wash the print free from the developer.

Now take some caramel backing or opaque and mix to a thin paste with hypo solution of about 1 in 10 strength.

The print is allowed to drain thoroughly, and is preferably blotted with blotting-paper. With a fairly large and pointed camel's-hair brush, paste over the whole of the developed part of the print, *keeping the line of color within a sixteenth of an inch of the unprinted portions*. The coloring-matter is only to act as a guide, and is washed off easily enough before the second development, but must be washed thoroughly to prevent the hypo interfering with the still sensitive parts of the print. Remember to wash the color downwards, or away from the unprinted parts.

The reason for keeping the color-line inside the printed parts is on account of capillary attraction, which otherwise would cause the hypo to overlap on to the unprinted parts.

The object of the above proceeding is obvious. Development of the first printing is incomplete; hence, when the second printing was developed the first would gain intensity. The process is perfectly safe providing such precautions as washing the color downwards and away from the second printing and undeveloped parts be observed.

In cases where a blank space has been left for the insertion of a figure or other portion in the first printed part, the washing must be performed by directing the stream of water on to the blank space. The caramel paste should be sufficiently thick to prevent its running when brushed on. When washing it off, use plenty of water, and run the water rapidly in order to dilute the hypo as quickly as possible.

When the first printing can be developed right out, the above proceeding is, of course, unnecessary, but the practice of covering the first printing with caramel backing is a great advantage, as it prevents harm from accidental exposure during subsequent printings. Needless to say, it is easily removed by washing and is in all ways perfectly harmless to the paper.

Where only clouds have to be added to a picture, the print may be turned upside down in the dish or on a sheet of glass, and the developer applied with a brush or tuft of absorbent cotton, so as to prevent it touching the other exposed parts. But this is not a very good method, as we get insufficient developer, and

therefore development on the horizon-line, owing to its running away from that part; also there is a great liability to stain, as the small quantity of developer placed on the print soon oxidizes. Streaks of uneven development also occur, owing to inability to keep up uniform contact.

The development of the second printing, when the exposure for the first allowed of complete development, is straight work; but where the first print is incompletely developed care must be taken to match the tone or intensity of the two printings.

Whether the quality of the negative for the second printing allows for complete development or not, it is inadvisable to expose for the purpose, but rather to ascertain previously the amount of over-exposure which will allow of development being stopped when the two intensities are as similar as possible. If this is not done we shall invariably obtain a different tone or color of deposit, although the quality of the second negative will affect it to a greater or less extent.

Such a difference in color may be rectified by an after-treatment to be described, but it is better to match the two intensities as near as possible during original development.

Case 2. Three printings.

Where one of the exposures allows of complete development.

The proceeding is precisely similar to Case 1, except that where one exposure allows of complete development. Let this be the last printing, if possible, as any tendency to loss of brilliancy due to prolonged immersion of the paper in the developers will be greatly counteracted by the greater intensity of the last printing.

Where none of the exposures allow of complete development the process is similar to Case 1. For each printing a fresh developer should be used, otherwise there is a tendency to loss of brilliance.

Use the developer of such strength as to allow of plenty of time to judge intensities, and remember that a weak developer will produce precisely the same effect as a strong one if allowed to complete its action; but never at any stage before the final will the intensities be the same.

Also remember that strong doses of bromide of potassium have a restraining and hardening influence on development *after the image has appeared*, but that smaller amounts must be used if added to the developer previous to development.

Simple Combinations.— The simplest form of combination-work is that of printing in skies to landscapes and seascapes. All sky negatives should be previously blocked out below the horizon-line, and landscapes above the horizon. It is preferable, when possible, to print and develop the landscape first, as it allows of a much better adjustment of the two printings.

Project the image onto the screen of a size slightly smaller than that intended for the print. Place against this a piece of red or brown paper, and carefully trace the outline. Cut this out and paste onto a piece of card. Now make the print of the size required and develop and rinse as described.

I. BENJAMIN STUDY OF THE NUDE

Project the sky image on the screen, place the colored glass in front of the lens, take the wet print and adjust it to the correct position for printing the sky. The exposure for the sky should, of course, have been previously ascertained, and, as before stated, little or no allowance made for a reduction of sensitiveness in the emulsion. During the exposure, which if possible should not be *less* than thirty seconds, the landscape-mask is held about one inch away from the print and a quarter of an inch above the horizon, and several times lowered till the edge of the landscape is distinctly visible, then quickly raised again. In this way the sky is vignetted onto the landscape.

Where trees or other prominent objects come on the horizon it is better to print the clouds first and slightly shade during exposure those parts where the objects will come. In this case, of course, the mask may be made for the sky, but it is not always necessary, as the landscape intensity is generally greater.

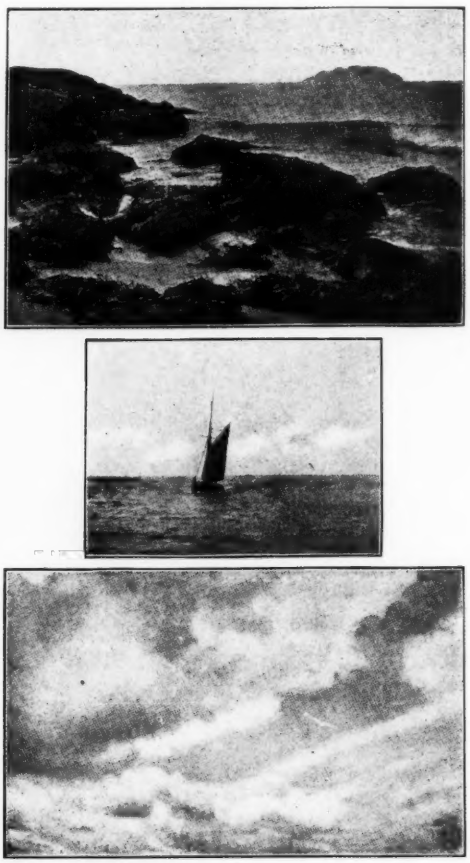
A very excellent proceeding in the above manipulation is to focus the image onto a movable piece of white cardboard, then place the wet print on the card and fix it to the screen after it is adjusted to the correct position.

The Introduction of Figures.— There are two methods of doing this.

1. Before exposing the body of the print, lightly paste the mask of the figure in the correct position; this leaves a blank space. Develop as usual, and ad-

just the figure to the blank space. In very large work some allowance may have to be made for the stretching of the paper, but it is generally insignificant.

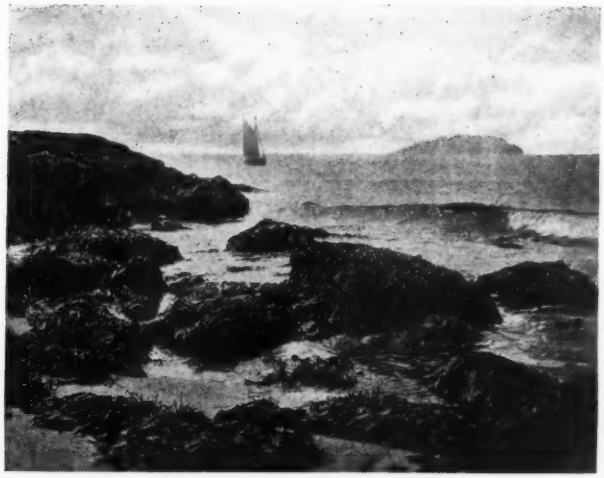
2. Make a contact-print of the figure and cut it out very carefully with a penknife. The body of this contact-print is now pasted onto the glass side of the



FIGURES 1, 2 AND 3

figure negative so as to have only the figure visible. The figure is then adjusted to the blank space left on the body of the print. This method is in no way preferable to the other.

Compound Printing.— In figure-work generally, such as figure-studies, great attention will have to be given to the lighting, and the slightest dissimilarity is



FINISHED PRINT FIGURE 4

fatally evident. In compound landscape and seascape work where sky and more than one figure or incident are introduced, the landscape is printed first, leaving blank spaces for the figures, etc. The figures are then printed in separately, without intervening development unless some special reason requires it; and finally the sky, as the other parts are covered with the backing-paste, as described.

After-treatment. Intensification and Reduction in One Operation.— When all printings are made and developed the print is fixed as usual.

Now it may be found that some of the printings are of different tone, owing to various causes, and that local intensification, reduction, accentuation or repression is required.

All these are most advantageously done in daylight in the following manner. Bleach the washed print (preferably after drying) in the following:

Potassium ferricyanide	10 grains
Potassium bromide	10 "
Water	1 ounce

Wash for three or four minutes and apply a developer diluted to $\frac{1}{20}$ normal. The lightest tones will develop first, the half-tones following, and the shadows last.

At any stage the development may be stopped and the print immersed in the fixing-bath, whence it will emerge in the same apparent condition as when immersed. At any stage during development, action may be stopped by washing, and local application of developer employed for accentuation of shadows.

Local application of hypo and caramel may be also employed. This must be washed off before another application of the developer. Complete redevelop-

CLARE J. CRARY AN ALASKAN SUNSET

ment will give more or less intensification and an equalization of tone-color, besides a general clearing-action.

The Dark-room Light.— Canary medium or yellow ground glass is better than anything else. Use as large an area of light-diffusing surface as possible, but carry out development either in the shadow or away from the light, occasionally taking the print closer for inspection.

The Illustrations.— With regard to the illustration, which was made with the purpose of embracing many of the points given in this article, a description of its construction may be of use.

Fig. 1 is the body of the print. The negative is not all that could be desired in quality. It is rather too thin and hard to allow of an exposure for development to the limit. It was therefore over-exposed to a considerable degree in order to produce sufficient detail in the high-lights of the water swirling round the rocks, without accumulating too much density in the shadows at the time development was stopped. It was then pasted over with caramel and hypo to within a sixteenth of an inch of the horizon-line of the left-hand rock, the sea-line and the island.

Fig. 2 shows the boat, also reversed, in order that it might be sailing into the picture instead of out of it. Now, a blank space had to be left for this boat by putting on its mask before the first printing, and this space had to be covered before the clouds were printed. To do this the caramel and hypo mixture was allowed to remain on the print for five minutes and then washed off, the boat-space covered with caramel *only* and the clouds printed. As a matter of fact,

only the sails and boat were covered up, as it was too difficult to trace a fine enough line for the mast, and here it will probably be seen to be defective in intensity. The printing of the boat was rather underdone, otherwise the mast would have been sufficiently intense to have shown well against the clouds. The whole print was then fixed, washed and dried.

Fig. 3 shows the clouds. These had to be reversed in order to suit the lighting of the landscape, which at the time of exposure was coming from the left-hand side. They were over-exposed slightly in order to produce a rather softer effect than in the original.

Fig. 4. Next evening the print was bleached and redeveloped as described, and during development the shadows were locally treated for greater intensity; the water under the heavy cloud also intensified, as well as the shadow of the wave and gullies in the rocky bank. The print was again fixed. The total time occupied in the construction of the print was about four hours.— *The Practical Photographer, No. 19.*

A NEW PRINTING-PAPER

Reddish Brown Tones by Simple Water Development

JAMES THOMSON

THERE does not seem to be at the present time any great desire amongst amateurs for the black-and-white print of India ink intensity as regards the deeper shadows. With the advent of Velox it will be remembered came a virtual craze for the photograph in carbon black, so-called, and the result in all too many cases was far from pleasing. The resultant "soot-and-whitewash" effect in portraiture was especially abhorrent to refined tastes, and the reputation of the paper suffered thereby.

Since that period happily has come a great change for the better. It is now possible to obtain gaslight papers to suit all classes of negatives. Delicate gradation is now to be found where formerly was abrupt contrast. When properly worked, such papers give results free of all suspicion of harshness.

While all this is true enough, warmer tones will be found more fitting for portraits. Sepia, red or brown appeal to the serious worker. Few are now content with simple black and white, nor does the burnished print satisfy. To produce some of the color-effects to be met with requires operations more or less intricate. Some beautiful reds, sepias and browns are obtained through toning with uranium or copper ferricyanide, bromide, kallitype and platinum papers being particularly suitable for such treatment. It is charged against uranium that colors obtained through its use in toning are impermanent. While such may be the case, the beautiful results are enough to tempt one to take the risk. For portraits, especially those of the head and bust order, the red-chalk effects are particularly pleasing. This is more apt to be the case when the print is mounted harmoniously on cover-paper with appropriately wide margins. One

has but to see such pictures properly mounted to admit that much depends on the mount, both as regards color and spacing; in fact, mounting may make or mar. For those not up to the niceties of mounting it is a safe plan to use a brown mat for a red or sepia picture.

Outside of carbon there does not seem to be any mode of producing red tones by direct printing. The glossy print lends itself to the varied changes of brown, purple and black, but not red, other than by first toning with gold and then with uranium or copper. For brilliant reds the black is especially to be commended. For this purpose the manufacturers now offer the specially prepared chromogens, which give us all the colors — red, green, blue and variations. With the old-fashioned plain, salted paper, wherein the preliminary salting is done with copper chloride, very good reddish browns are possible by the simple expedient of fixing in hypo. This is a fact not generally known, even among those who have made use of this excellent printing-method, toning as they usually do with gold. A color that is "bricky" and detestable in the glossy print lends itself admirably to the mat surface, more especially when the paper stock employed is of a good grain or ribbed.

In all experimenting with the salts of iron I have had in view the perfecting of an easily-worked printing-paper giving red tones. The browns and sepias are easily attainable by simple water development, as is the case with the Eastman papers, but a good red can alone be had by resorting to additional manipulation in either the copper or uranium bath. As with platinum, the size of the paper exerts a considerable influence in results. Some linen correspondence-papers, such as a smooth finish Old Berkshire Mills stock with the formula I am about to submit, gave decidedly red effects, while the results on some other brands, such, for instance, as Marcus Ward's Irish linen, had much less. Any of these fine stocks will answer for sizes up to 5 x 7, letter size 8½ x 10½ cutting up into four 4 x 5 prints. Most any good linen paper will answer for our purpose, but where there is an absence of sizing, a coating of arrowroot will be in order.

Water-tone Paper, Reddish Brown Tones

Salting-solution

Citrate of iron and ammonia	28 grains
Ferric oxalate	6 "
Oxalate of potassium	22 "
Oxalic acid	5 "
Citric acid	3 "
Uranium nitrate	16 "
Silver nitrate	4 "
Gum arabic	10 "
Distilled water	1 ounce

With a wad of absorbent cotton, a pad or a flat camel's-hair brush give a *thin* even coating. When surface-dry, hasten complete drying by artificial heat. This ensures brilliant prints by keeping solution on the surface.

WILLIAM H. PHILLIPS — THE ROAD FROM TIVOLI

THIRD AMERICAN PHOTOGRAPHIC SALON

Sensitizer

Silver nitrate	50 grains
Citric acid	25 "
Distilled water	1 ounce

Coat the salted paper with this solution, drying precisely the same as when salting.

Take from the printing-frame before half-tones are visible. Wash away the unaffected salts as with blue print, then fix for from three to five minutes in a bath of hypo and common salt, a grain of each to the ounce of water. When fixed, wash for half an hour, drying on clean papers.

In my own practice I seldom measure the hypo and salt. In a couple of ounces of water I mix a pinch of each, which seems to answer well enough. Short fixing tends to reddish tones, longer fixing to brown. Yellowness of the whites in the dried prints is indicative of insufficient clearing.

Holding the print under the tap, so as to wash away the unreduced salts as quickly as possible, is a good plan when over-exposed. When under-exposed wet the print and hold it in the palm of the hand for a few minutes, then wash as usual. We may combine solutions and make a single job of coating, but it should be done just before beginning operations. For large sheets the double operation gives the greatest satisfaction, though for small sizes, post-cards, etc., a little may be mixed just before "coating," and the work done by a single application. It is difficult to mix solution to answer for all negatives and papers. Rough and porous papers always require dilution. It is a good plan to prepare salting-solution of maximum strength, diluting a small quantity as occasion demands. In this way one can suit all classes of negative — flat or otherwise. The following is such a salting-solution, the silver-solution requiring no change under any circumstance. The latter, however, will be the better for filtering.

Salting-solution, Strongest

Citrate of iron and ammonia	40 grains
Ferric oxalate	10 "
Oxalate of potassium	30 "
Oxalic acid	6 "
Citric acid	4 "
Uranium nitrate	24 "
Silver nitrate	5 "
Gum arabic	10 "
Distilled water	1 ounce

This will answer admirably for thin overtimed negatives that are full of detail but lack density. If greater contrast is wanted add a few drops of a five per cent solution of potassium bichromate. For average purposes we may dilute from a quarter to a half. Printing in the sun is advisable; otherwise, progress is slow.

While the use of uranium nitrate is not imperative and the reduction is not very complete, the color is improved by its employment. Excellent results, however, may be had when it is omitted.

This formula has been fully tested and fine pictures produced by its use. While rather complicated, each ingredient seems to be needed. The simple formulas, where but few ingredients are employed, give broad effects, but fail to register the finer detail in the negative. This process, simple to work and, withal, inexpensive, furnishes an extremely interesting variation of the ordinary blue-print.

THE OPTICAL INTENSIFICATION OF PAINTINGS

R. W. WOOD

ONE of the great difficulties which the artist has to contend with in representing scenes in which great contrasts of luminosity occur is the comparatively narrow range of luminosity obtainable on canvas with pigments. According to Aubert, the whitest paper is only fifty-seven times as luminous as the darkest black paper, and this probably represents about the range obtainable in paintings. Contrast with this the enormous range of luminosity in a sunlit landscape, where the high-lights are many hundred times brighter than the deep shadows, to say nothing of sunset views, where the disc of the sun itself is to appear in the picture. As is well known, the colors of natural objects change in tint as the illumination is increased, green becoming yellowish, for example; and artists, by taking advantage of this circumstance, consciously or unconsciously, are able to suggest a high degree of illumination without actually reproducing it. Pictures are sometimes improved by strong local illumination; any one who has spent much time in sketching must have frequently noticed what pleasing effects are sometimes produced when a ray of sunlight, filtering through the trees, falls upon that portion of the canvas which represents, say, a sunlit meadow. Noticing effects of this kind so frequently, I have been led to experiment with carefully graded illumination, and have obtained results of remarkable beauty. If we can produce a strong illumination on all of the high-lights of the picture, and a feeble illumination on all of the shadows, we shall obviously greatly increase the range of luminosity. This may be done by a very simple means. We have only to take a photograph of the painting on an orthochromatic plate, preferably on a red-sensitive plate with a suitable ray-filter, make a lantern-slide from the negative, and project this picture, not on a white screen, as is usually the case, but upon the original painting. The experiment is to be made in a darkened room, of course.

Effects of a very startling nature are produced in this way, especially in the case of moonlight and sunset pictures with fine cloud effects. The most striking, and artistically the most pleasing, subject which I have yet tried is a little pastel of the market-place in Concarneau (Brittany) by Bullfield, which is a wonderfully sunny picture. Under the graded illumination of the lantern the picture becomes filled with a perfect flood of sunlight, and we feel at once that here for the first time we are looking at a picture in which the enormous lumi-

nosity contrasts of nature are really approached. If after looking at the picture illuminated in this way for a few minutes we remove the slide from the lantern, allowing a uniform illumination to fall upon it, we feel a decided shock. The picture looks as if it had not been dusted for ten years, the sunlight leaves it, and everything looks flat. As we become accustomed once more to the usual illumination, the appearance of the picture gradually improves. It is most curious, however, to note how a short view of the painting under the light of the lantern educates us at once to a higher standard of luminosity contrast; so much so, in fact, that when we change suddenly to ordinary illumination the picture at once strikes us as a very feeble attempt at anything like correct values. The effects are very different, according to whether we take our negative on an ordinary or on an orthochromatic plate, especially if there is much blue in the picture. We can in this way alter the relation of the values in the picture, and study the effect.

It is my opinion that if the values are correct in the original painting, they will hold under the graded illumination produced by the lantern. If they are not right, the errors will be glaringly magnified. As yet I have not had an opportunity to experiment with many pictures, but the method is so easily carried out that any one having a good lantern can repeat the experiment.

If the picture contains patches of bright, pure red, and a red-sensitive plate is not available, it is a good plan to touch up the negative, as otherwise the illumination of these patches will be too feeble. Any desired effect can be secured by local reduction or intensification of the negative or lantern slide. We can in this way experiment to our heart's content with a painting, altering the values at will without injuring it in the slightest. A most curious effect is obtained if the negative itself is projected upon the painting. This, of course, lessens the contrast, and if the negative is a fairly dense one, it may destroy the contrast almost entirely, making the picture look like an almost flat wash of chocolate. This experiment is instructive only as showing how completely the values in a picture can be controlled by local illumination.

The method is, of course, of very little practical importance, though a small exhibition of suitable pictures illuminated in this way would be well worth attending. Each picture would have to be illuminated by a separate lantern, of course.

In repeating these experiments, the only difficulty which will be found is getting the lantern picture "into register" with the painting. In taking the negative, care should be taken to have the painting exactly vertical, and the lens of the camera directly in front of its center. The same conditions should obtain during the illumination of the painting. It takes some little practice to get the projected picture exactly the right size. The best plan is to select two conspicuous objects, and note whether their distance apart is greater or less in the projection than in the painting. If the former is found to be true, the painting should be brought nearer to the lantern, the focus being changed, of course.

Very likely scenic effects on the stage could be heightened by employing this method of illumination, or some modification of it.— *Scientific American.*

G. R. BALLANCE — IN THE HILLS, BORDIGHERA

DAISIES

RAY FORMWALT FOLLOCK

MESSENGERS of truth and beauty,
Just to be is thy full duty!
Upon thy golden disk I gaze,
Unto my lips thy ray-flowers raise,
With a wish to be like thee —
Simple, chaste, untrammeled, free.

EDITORIAL DEPARTMENT

THE DUTY OF OUR CAMERA CLUBS

WHILE the formation of the much-discussed National Academy of Photography remains in abeyance, it is suggested that, in the absence of a tribunal from which there shall be no appeal — in the matter of æsthetics — authority be vested in our leading camera clubs. It has always seemed that these admirable organizations have gone their quiet, uneventful way, quite oblivious to the fact that they lived among photographic conditions which suffered for the lack of competent supervision. As has often been pointed out in the editorial pages of PHOTO-ERA, there is a deplorable absence of knowledge in matters photographic in our educational institutions — our colleges, museums, libraries — to the extent that the photographs exhibited in connection with educational schemes are of little or no practical value. In such cases it were better, indeed, to have recourse to old-time wood-engravings or lithographs, although these easily give way to photographs whose excellence is beyond question.

There is nothing so disappointing to a cultivated eye as a miserably-executed photograph. Only recently there was shown, in the public library of a certain Eastern city, a collection of photographic prints illustrating the beauty and intricacy of oriental mural decoration. The prints were on glossy paper, presumably Solio, and of a rich purple tone; but here and there were places totally without detail, showing that the paper had not been in optical contact with the negative in the printing-frame. Every print was disfigured in this manner, yet the matter passed, apparently, unnoticed. Shortly before, in the same hall, a large collection of photographs, illustrating Spanish architecture, was offered for public inspection. A distressing feature of these views was the marked tendency of all vertical lines to converge at the top. When the person responsible for these atrocities was asked to explain, he replied, naïvely, that the prints had been imported at considerable cost and were, therefore, above criticism. Less than half a mile distant from this eminent educational institution is the headquarters of a camera-club distinguished for the high artistic work of its members. What splendid missionary work awaits these camerists! Let them awake to a realizing sense of their power and enter a field of usefulness eagerly awaiting them.

The lesson of this incident is as applicable to Portland and Providence as it is to New York, Philadelphia and Chicago, each of which cities has a photographic society of which it may be well proud. Let each of these superb organizations make it a self-imposed duty to guide our institutions of learning in their honest, though unintelligent, efforts to utilize photography as an aid to important educational work. Activity along these lines has, as yet, not been attempted by the professional workers, who meet annually to wrestle with problems affecting their individual welfare. One looks, therefore, to the camera club — one of

recognized weight and authority — which, if it but will, can exert a powerful influence in behalf of photography, so far as it affects its application to public educational purposes. Such public-spirited action, based upon purely altruistic motives, cannot fail to redound to the honor of the society and the glory of the art.

CARE OF THE EYES

THERE has not been a photographic periodical published either side of the Atlantic that has not devoted more or less space to photographic optics, and, in spite of this, but scant knowledge on this subject prevails among the workers of this country. There is another phase of this study that should interest not only those practising photography, but others, and which we have not seen or heard mentioned. We mean the care of the eyes in focusing and, more particularly, in the dark-room! It is astonishing how many practitioners are suffering from acute astigmatism and do not realize it. This matter should receive instant attention. Here, again, an acquaintance with optics will prove valuable, for one should carefully avoid the optical fraud, or "eye-specialist," who boldly advertises his willingness to scientifically investigate and correct impaired vision, and furnish the necessary glasses — all for the sum of one dollar! He does a large business; but, nevertheless, he is not to be trusted. Let every worker, whether his eyes trouble him or not, lose no time consulting an oculist, not an optician, although any reputable optician — or refractionist, as he is sometimes called — will refer his customer to an oculist, who gives the eyes a scientific and conscientious examination and provides the patient with a formula, which is filled by the optician. One is the doctor, the other the mechanic. This method is the *only* safe one. It will cost more than one dollar; but is not the precious gift of sight worth the effort and the relatively small expense?

TO THE CONSCIENTIOUS WORKER

WHILE everybody rejoices in the advance photography has made as a pictorial art — duly recognizing the marked and valuable improvements in apparatus and technical manipulations — we, the older workers, cannot but look back with a sigh upon the days when a sounder knowledge prevailed of matters technical. True, the greatly-improved methods in picture-making of to-day make a long preparatory course unnecessary; but ought not every devotee be at least on speaking-terms with the technical evolutions from which emerges the photograph — Daguerre's priceless gift to humanity?

Realizing the need of a well-grounded knowledge of photographic optics, writers of the highest authority are busy contributing valuable, timely and practical works to this important field of literature, which, after careful perusal, we review in these pages for the benefit of the progressive worker. Chesterfield's aphorism "What is worth doing at all is worth doing well" may fittingly be applied to photographic pursuits. Our aim should be to excel, and that can be done only by conscientious, intelligent effort.

THE ROUND ROBIN GUILD

Conducted by Elizabeth Flint Wade. Specially designed for the amateur photographer and the beginner. Membership may be obtained by sending name and address to PHOTO-ERA.

FLORENCE M. ROBUTS HONORABLE MENTION
POST CARDS

"Well, I never seen the ocean,
An' I never seen the sea;
On the banks o' Deer Crick's
Grand enough fer me."
— *James Whitcomb Riley.*

"I wind about, and in and out,
With here a blossom sailing,
And here and there a lusty trout,
And here and there a grayling."
— *Lord Tennyson.*

The charming little picture which heads the column might well serve for an illustration of either of the above quotations. James Whitcomb Riley sings of little Deer Crick, which — though he has never seen the grandeur of the ocean — he finds quite grand enough for him, and this picture of a winding, wandering stream might well be the original Deer Crick on whose banks you

"Soak your hide in sunshine,
And waller in the shade,
Like the Good Book tells us,
'Where there's none to make
afraid.'"

Then again it illustrates the vagaries of Tennyson's Brook, which, describing its course, says,

"I wind about, and in and out,"

and

"With many a curve my banks I fret."

The picture was set just where it is as a guidepost to the announcement of a prize contest in which all the members of the Guild will be interested — it is hoped actively interested, for it will give them an unusual opportunity of demonstrating what they can do with their cameras.

PHOTO-ERA purposes to introduce into the monthly competitions of the Round Robin Guild not only a new phase of

CHARLES V. WEILER HONORABLE MENTION
POST CARDS

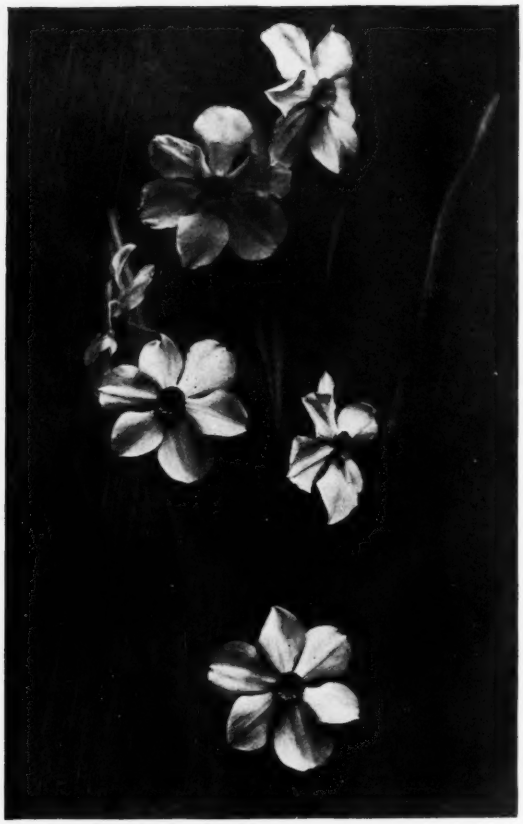
W. R. VOGEL FIRST PRIZE—POST CARDS

work, but also a more ambitious one than has heretofore been attempted. This is offering the prizes in the January competition for the best set of photographs, not less than five or more than ten, illustrating either one of two selected poems, which lend themselves specially to photographic illustration.

Placing the closing date some months ahead gives ample time for preparation — the summer months for securing the negatives and the autumn for printing — and we are, therefore, expecting that a large number of excellent collections will be entered by Guild members in all parts of this country.

Any member of the Guild may compete, and while each member may illustrate both poems if he wishes, he will be awarded but one prize. The poems selected for this competition are Tennyson's "The Brook" and Bryant's "The Unknown Way." The poems chosen are directly opposite in treatment, one taking the amateur by a winding stream and the other leading him by woodland and meadow.

Tennyson's "The Brook" is embodied in a narrative written in blank verse; the poem is introduced in fragments, so to speak, until it reaches completion. The blank verse tells of the return of one Law-



HARRY G. PHISTER SECOND PRIZE — POST CARDS

rence Aylmer to his home in England after an absence of twenty years in India. The little poem, which sings its way through the narrative, is entirely separate from the story. However, to make the connection between the narrative and the poem, the subject of one illustration will be that of Lawrence Aylmer.

"So Lawrence Aylmer, seated on a stile
In the long hedge, and rolling in his mind
Old waifs of rhyme, and bowing o'er the
brook
A tonsured head in middle age forlorn,
Mused, and was silent."

The following subjects are taken from the poem:

"I come from haunts of coot and hern . . .
And sparkle out among the fern."
"By thirty hills I hurry down."
"By . . . a little town,
And half a hundred bridges."
"I babble into eddying bays."
"With many a curve my banks I fret."
"And many a fairy foreland set,
With willow-weed and mallow."
"I wind about, and in and out,
With here a blossom sailing."
"I steal by lawns and grassy plots."

W. A. ROWLEY — THIRD PRIZE — POST CARDS

"I make the netted sunbeams dance
Against my sandy shallows."
"I murmur under moon and stars
In brambly wildernesses."
"And out again I curve and flow,
To join the brimming river."

The selections from "The Unknown Way" are quite as graphic and full of picturesque possibilities:

"A burning sky is o'er me,
The sands beneath me glow."
"From the dusty path there opens
Eastward an unknown way;
Above its windings, pleasantly,
The woodland branches play."
"Wandering by grassy orchard ground."
"Or by the open mead."
"Goest thou by nestling cottage?"
"Goest thou by stately hall?"
"By steeps where children gather
Flowers of the yet first year?"
"By lonely walks where lovers stray?"
"Or haply dost thou linger
On barren plain?"
"And oft upon the shady vale,
With longing eyes look back."
"Dost thou, O path of woodland,
End where the waters roar?"

It will be seen in looking over these selections that in each set of pictures there is an opportunity to introduce figure-studies. In the poem "The Brook" the choice is limited to one, but in "The Unknown Way" there are several quotations in which a figure would appear, to the advantage of the picture. In the first quotation from this poem only a figure-study would typify the idea which the writer conveys.

The competitors are not expected to make an illustration for each quotation given. The number of pictures sent must not be less than five nor more than ten for each poem. The amateur may make his own selection and use his own conception of the idea embodied. The finishing of the pictures will be considered in the awarding of the prizes, though of course this will be secondary to the artistic merit.

In the April number of PHOTO-ERA the frontispiece is entitled "Where the brook winds through the meadow." The picture is by William T. Knox, and would most admirably illustrate one of the selections given. Intending competitors would do well to study this admirable composition.

MRS. GEO. L. GILBERT HONORABLE MENTION

ROUND ROBIN GUILD COMPETITIONS

First prize: Value $10.00.
Second prize: Value $5.00.
Third prize: Value $2.50.

Prizes may be chosen by the winner, and will be awarded in photographic books or magazines published or advertised by us; in enlargements, art portfolios of photogravures, mounts or other photographic materials advertised by us, or, if preferred, we will send any article of a photographic or art nature which can be bought in Boston for the amount of the prize won.

RULES

Membership in the Round Robin Guild, with all its benefits — among which the correspondence privilege probably stands first — is free to all, and we invite every photographer to become a member. Entrance in the monthly competitions is also free to all, whether subscribers to PHOTO-ERA or not.

SUBJECTS FOR COMPETITION

May — "Nocturnal Photography." Closes June 30.
June — "Interiors, with Figures." Closes July 31.
July — "Landscapes." Closes August 31.
August — "Waterscapes." Closes September 30.
September — "Sunsets." Closes October 31.

E. W. BROWNING — HONORABLE MENTION—POST CARDS

October — "Windows and Doorways." Closes November 30.
November — "Genre Studies." Closes December 31.
December — "Home Portraiture." Closes January 31.
January — "Illustrated Poem." Closes February 28.

AWARDS — POST CARDS

First prize: W. R. Vogel.
Second prize: Harry G. Phister.
Third prize: W. A. Rowley.

Honorable Mention: Mrs. George L. Gilbert, Charles V. Weiler, E. W. Browning, Florence Marie Robuts, W. H. Winchester, Charlotte M. Birch, Norma McFall Collmar, John W. Shuler, Mrs. Loudorica Butter, Mrs. M. E. McDougall, Nelson C. Bennett, Mrs. R. S. Cocks, James Thomson, Jos. Jessup, R. O. Semmes, M. D., Robert A. McIntyre, C. M. Whitney, Rembrandt Rowe, George H. Hardy, Frank M. Howard, Elmer E. Carr, Wm. H. Zerbe, Lewis J. Fitler, Percy Hines, Rev. M. F. Oerter, H. H. Harvey, Harry D. Williar, James K. Stafford, Richard Hines, Jr.

SENSITIZING FABRICS

Solutions for sensitizing fabrics may be bought ready for use, but most amateurs prefer to mix their own solutions. Fabrics of close, even texture lend themselves readily to photographic printing. Linen and firm silk are good mediums, and cotton, the smoothly woven English longcloth, also makes an excellent cloth, especially for blue-prints. The first step is to remove all chemicals from the material. With linens and cottons the cloth is well washed and dried, then immersed in a salting-solution made after the following formula:

Chloride of ammonia	60 grains
Gelatine	20 "
Water	20 ounces

Soak the cloth well and drain and dry. It is then ready for the sensitizing-solution.

Nitrate of silver	65 grains
Citric acid	15 "
Water	3 ounces

Let the fabric remain in this solution till thoroughly wet, then stretch it on a smooth board, hold in place by thumb-tacks, and dry in a dark room.

Use any combined bath for toning, or tone and fix as for silver prints.

SULPHITE SOLUTION WHICH WILL KEEP

THE objection to having a bottle of sodium sulphite solution ready made up on the shelves in the dark-room is that it will not keep, but very quickly decomposes and becomes useless. It is nevertheless a great inconvenience when wanting to make up a developer in a hurry to have to wait while the sulphite dissolves, which sometimes takes a considerable time.

The addition of glycerine to the solution, however, acts as a preserving-agent, while it in no way interferes with the chemical action of the developer. The following is the formula:

Sodium sulphite	5 ounces
Glycerine	3½ drams
Water	1 pint

This makes a good stock solution, which may be diluted as desired. It will keep for six or eight months easily, without deteriorating to any practical extent. Other substances, such as mannitol, have the same effect, but are less readily obtainable.—*The Amateur Photographer, London.*

AMMONIUM HYPOSULPHITE

IN a recent issue of the *Wiener Mitteilungen* Baron von Huebl states that ammonium hyposulphite has now been placed upon the market in Germany and Austria as a substitute for hypo. For many years attempts have been made to discover a suitable solvent of the silver haloids having none of the disadvantages of hypo; but most of the salts suggested, although readily dissolving silver chloride, did not possess sufficient solvent action on the more unyielding bromide and iodide. Ammonium hyposulphite, the solvent powers of which are approximately the same as the sodium salt, was first suggested by John Spieler in 1868 and again by M. Laburre in 1892, its chief advantages being its greater solubility in water and consequent more rapid elimination from prints and plates, and the rapid fixation effected by it in combined baths—one of the most important points as regards permanency of the image. Up to the present time the cost of the salt has been prohibitive, but this now seems to have been overcome.

DRYING BROMIDE PRINTS WITHOUT CURLING

MR. CUTHBERTSON, recently demonstrating before the Cricklewood Photographic Society, England, made the statement that if bromide prints after being washed were squeegeed to a ferrotype plate, to expel all superfluous moisture, they might be at once stripped off, and, if laid out to dry, would dry without curling.

ENLARGING TO SECURE CONTRAST OR SOFTNESS

A SOFT enlargement may be best obtained from a hard negative by increasing the intensity of the light, lengthening the exposure, choosing a rapid paper and using a very dilute developer; the result will be a soft print in pleasing gray tones. To secure a snappy print from a soft negative it will be necessary to decrease the intensity of the light, give as short an exposure as possible, choose a slow paper and use a strong developer well restrained with potassium bromide.

DRY MOUNTING-TISSUE

IN a recent issue of the *Deutsche Photographen-Zeitung*, a method of preparing thin tissue-paper for dry mounting is described by Herr Hartmann.

The tissue-paper should be laid on a waxed sheet of glass and thoroughly painted with the following mixture, after which it should be allowed to dry and finally stripped from the glass support.

Gum sandarac	10 parts
Copal	3 "
Orange shellac	4 "
Resin	3 "
Venice turpentine	2 "
Alcohol	11 "
Spirits of turpentine	11 "

The tissue treated in this manner is cut to proper size, placed between the print and mount, and brought into contact by applying a hot flat-iron. For protection to the print, it is advisable to place a sheet of paper between the print and the hot iron.

A FEW MISTAKES IN RETOUCHING

WHEN to stop in retouching is as important as in developing. Lack of thought regarding this makes the work mechanical, and, as a result, it is safe to say that 90 per cent of the portraits made in professional studios are overdone in this respect. The fault of carrying retouching too far unquestionably holds first place among the many mistakes in this particular process.

Another mistake is the loss of texture, which renders the flesh of young and old alike, and yet having the appearance of a smooth billiard-ball, rather than flesh; or, even worse, the same texture for flesh, cloth and wood. The foolishness of such careless work needs only to be mentioned to be recognized.

Mechanical work and the mechanical touch are also to be avoided, for they tend to place the highest light always in the same place, without regard to the position of the head or the direction of the light, and to give everything the same texture; both of which are obviously wrong.

NOTES AND NEWS

OUR STANDARD OF ADVERTISING

If a trade advertisement does not appear in the pages of PHOTO-ERA, it is because of the following reasons:

First, The necessarily high price of our advertising-columns.

Second, Our refusal to accept advertising contracts from firms, however prominent, figured below our established rates.

Third, We decline to print, at any price, advertisements reflecting on the merits of the products of our other advertisers.

Fourth, Our refusal to advertise any goods or any concern of a questionable character.

GRAND RAPIDS CAMERA CLUB EXHIBITION

THE Camera Club of Grand Rapids, Mich., one of the most progressive photographic societies in the country, held its ninth annual exhibition of photographs in the Ryerson Public Library Building April 16-30. The work shown was of uncommon excellence, in this respect surpassing that of the Loan Collection, in which figured the names of eminent pictorialists. The prints of Charles Vandervelde, a club-member, were conspicuous for their strong poetic quality, their marked pictorial beauty and appreciation of decorative effect. These characteristics were exemplified in "The Bridge," "Decorative Landscape" and "Where the Mermaids Dance." A series of prints by Eleanor W. Willard, illustrating various printing-processes — platinum, carbon, kallitype, bi-gum and canvas — proved an important feature of the exhibition and aroused considerable interest. Her "Breaking of the Storm," in gum, and a view of a Dutch canal, in green gum on canvas, possessed eminent pictorial qualities. Fedora E. D. Brown contributed several of her famous bi-gum prints on Japanese tissue, of which "The Brook in Winter" made a deep impression. "The Way Home," by Avery E. Field, deserves special mention for its richness of tone. Dr. and Mrs. Rawson showed an extremely meritorious group of portraits, genre and landscapes, among which "A Good Smoke" and "Eventide" took high rank. The exhibit of Kryn Stoel gave evidence of a fine sense of pictorial composition, of which "Among the Sandhills" was an admirable example. Other members contributing were G. D. Kingwell, Claud A. Benedict, George E. Fitch, Llewellyn Culver, H. A. Clementsen, Abbey M. Bush, Edgar S. Gage, E. T. Honey, Mrs. J. P. Seymour, Helen Vilas and M. C. Wright. Among the contributors to the Loan Collection were Jeanne E. Bennett, Louis Fleckenstein, J. H. Field, John Chislett, Wendell G. Corthell, W. E. Strayer, Carl Rau, Henry Hall, R. L. Sleeth, Jr., and Charles E. Barr.

A feature worthy of emulation by other clubs was a series of highly instructive lectures, given in connection with the exhibition, by recognized experts. One of these illustrated talks was delivered by Eleanor W. Willard, on "Photographic Art and Its Printing-Processes," and another by Rev. Sydney Usher on the subject of lantern-slides, slides made and colored by Japanese photographers being used on this occasion. These lectures, as well as the exhibition, created wide-spread interest in the community, drawing large crowds, which circumstance speaks volumes for the club's spirit of enterprise and lofty purpose. This should make certain clubs in the East sit up and take notice.

THE THIRD AMERICAN SALON

THE Boston Camera Club has withdrawn from the Federation of Photographic Societies, thus disposing of the possibility of the Third American Photographic Salon being seen in Boston, this season, at least. This circumstance operated in favor of the San Francisco Camera Club. Owing to the catastrophe of last year, the City of the Golden Gate has had no adequate exhibition-facilities and, consequently, lost a rare opportunity. With characteristic enterprise the Camera Club of Grand Rapids, Mich., secured the privilege to exhibit the Salon pictures. The collection was on view at the Ryerson Public Library from April 25 to May 2, and was most successfully attended.

A NEW TRANSFER-PAPER

THROUGH the ingenuity of an Eastern amateur a new gelatine transfer-paper has come into being, its merits being such as to prompt the formation of a stock company, with ample capital to put it properly on the market. The main feature of the improvement of an old method, familiar to the average worker, consists in the toughness of the film, the ease and simplicity of manipulation and the practical indestructibility of the film-picture after the completed transfer to suitable bases, such as glass, porcelain, wood, or, in fact, almost any flat, hard and even surface. The name of the makers is the Wiggin Photographic and Transfer Paper Company, Lynn, Mass.

THOSE SWISS PHOTOGRAPHS

IT is not always wise to publish attractive photographs and omit the name of the maker. This is shown by the fact that PHOTO-ERA has received many inquiries regarding the authorship of the three picturesque Swiss views which appeared in the January number of this magazine. Unable to obtain this information from the art-dealer who kindly loaned us the originals, we made inquiries on our own account, and have learned that the artist's name is G. R. Ballance, who enjoys a high reputation as a photographer of Swiss and Italian scenery. In response to numerous requests from readers of PHOTO-ERA, this magazine will publish from time to time other beautiful specimens of his art.

ONE OF THE GREATEST ACHIEVEMENTS OF PHOTOGRAPHY IN AMERICA

At Winona Lake, Ind., one of America's greater Chautauqua Assemblies, a building has been erected by photographers, known as the *Daguerre Memorial Institute*, and dedicated in honor of Louis Mandé Daguerre, who presented photography to the world. This is perhaps the first and only building known to have been erected in the interests of professional photography, wherein a permanent Salon and Photographic Museum may have been established and maintained. Several thousand dollars' worth of pictures are now hung upon its walls, and its future only bids a higher honor for the profession as an art, as a science and as an industry.

This is not only a monumental building for the professional photographer, but its greater fame is intended to be one of acknowledged merit and general publicity, and to assist in raising the moral, the educational and professional standard to a higher plain, and ultimately encourage the organization of other institutes of a similar character. It is the beginning of a new era in the advancement of photography. It is building a character for the future of the profession.

The managers of this institute have resolved that the highest honors possible be given to the works of the masters; that they be rewarded for their loves and labors. They have decreed to award a *diamond medal* for the best picture to be hung at their annual exhibit July 8–12, 1907. This medal will be known as the "*Diamond Medal of Honor*" and will bear an inscription of the title of the picture for which it was awarded, as well as the name of the institute by which it was given. The picture receiving this honor shall be hung in the Salon as a permanent exhibit, its award be inscribed thereon with date and name of maker, and all honor possible be ascribed thereto.

In addition to the "Diamond Medal of Honor," the Photographers' Association of Indiana has decreed to award a gold, a silver and a bronze medal to the pictures which may have been chosen as second, third and fourth in merit, respectively. Pictures winning these honors shall be hung in the Salon as a permanent exhibit. In addition to the medals awarded for pictures, which may be chosen as worthy to be hung in the Salon as a temporary exhibit, a certificate of special distinction will be awarded by the Daguerre Memorial Institute.

CONDITIONS OF AWARD

Honors are open to the world, Indiana only excepted. There will be no entrance-fee; no restriction as to when negative was made; print to be of any size, framed or unframed. The only qualification required is *picture must have title*, as same will be catalogued and known in the future by title and maker. No photographer who is a resident of the State of Indiana will be entitled to enter for the honors as given in 1907. Transportation-charges must be paid or pictures will not be accepted. Pictures to be addressed to H. E. Houck, Winona Lake, Ind., care of Indiana Association of Photographers, and reach Winona Lake not later than July 3, 1907. For further particulars address Geo. J. Parrott, Fort Wayne, Ind.; Geo. G. Holloway, Terre Haute, Ind.; and C. W. Neiswanger, Muncie, Ind., Trustees Daguerre Memorial Institute.

EXHIBITION OF THE PORTLAND CAMERA CLUB

One of the most attractive photographic displays seen in Boston during the last few years was held by the Portland Camera Club in the Boston Camera Club's rooms, April 22 to May 4. About seventy-five prints by twenty-two members were on view, bearing testimony to the high reputation of a group of pictorialists which, for the cultivation of lofty artistic ideals and unity of purpose, is widely recognized as the banner photographic club of New England. The winter landscapes of W. B. Post were distinguished by that absolute mastery of technique which makes the beholder forget that there is such a thing as workmanship. It is the spontaneous, impersonal quality, the art that conceals art, together with a marked sense of poetic beauty, which places such pictures as "Drifted Road" and "Lengthening Shadows" on a level with the noblest productions of the etcher's art. In J. R. Peterson the club has another able and sympathetic interpreter of nature's alluring moods. Although not, perhaps, as impressive in choice of subject as the work of two years ago, the prints shown here by this artist indicated a distinct gain in suggestiveness and breadth of treatment, that imparts to his work a still higher artistic value. To this class of pictures belong "The Wave," "Wave Action"— eloquently proclaiming the mysterious beauty of the sea —"Winter" and "Crest of the Hill." Close upon the heels of these exponents of true photographic art came S. S. Scolfield. His strongest picture, "Winter," was capitally composed, the group of figures in the street-scene taking its proper place. "The House-Boat" again illustrated the artist's mastery of pictorial composition, both pictures showing a rare appreciation of atmospheric perspective. F. H. Thompson's most effective print, "As the Night Lowers," represented a gorgeous sky, at sunset, brilliantly reflected in the waters of a pond, against which loomed up, in strong relief, a long stretch of reeds. The picturesque foreground and the celestial pageant were struggling for the mastery. This contest for pictorial supremacy need not have been recorded by the artist, had he been able to modify one of the contending elements in favor of the other. C. F. Clarke contributed a number of landscapes which reflected his well-known, ingratiating style. He

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In Every Land

under all kinds of conditions, with every variety of subject that the photographer encounters, whether he be photographing for pleasure or for profit, it pays to have your camera equipped with

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lenses. You will be sure of those most valued pictures that are most apt to be failures unless the lens has the speed and fine optical qualities of TESSAR. Ask the dealer to show you Kodaks, Premos, Centuries, Hawkeyes, Graflex, and other cameras with TESSAR Lenses.

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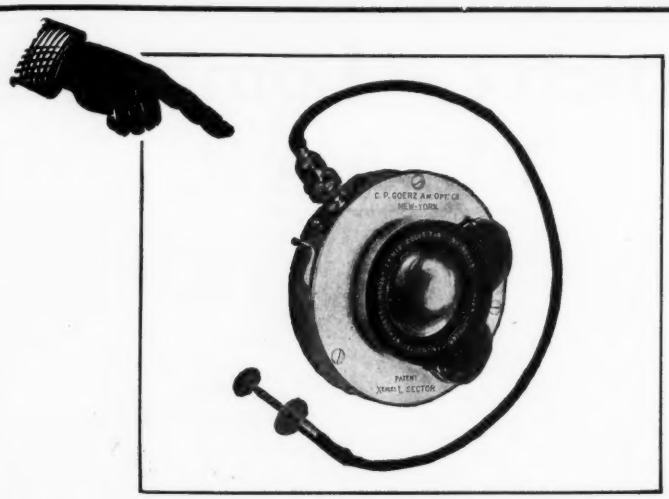

Some Pointers on Shutters

Pointer No. 1

¶ The efficiency of a "Between-the-Lenses" Shutter is in direct proportion to the rapidity with which it opens and closes and to the time the lens remains fully open.

¶ In the XEXCELL Sector Shutter, the duration of the time required to open and close the lens is reduced to a minimum, making the XL Sector Shutter the fastest of its kind on the market.

This is true of the Sector Shutter **AT ALL SPEEDS.**

¶ The speed varies between 1 second and 1-150th of a second. Bulb, time and instantaneous exposures being obtainable with either finger or mechanical release.

¶ The XL Sector Shutter is the best Kodak and Hand Camera Shutter to be had at any price.

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loves to portray the serene and mystic charm of the woods, the loving, sympathetic touch of the artist being discernible in all his pictures. In "New York Bay" and "Kearsarge Brook" C. F. Berry demonstrated his uncommon ability in managing the difficulties of marine work, and evincing a well-developed sense of pictorial effect. G. E. Fogg's "Late Afternoon, Summer" and "Late Afternoon, Winter" give a pleasing evidence of the artist's power to adequately express his deep and sincere love of nature. It would seem as if the last-named picture lost in effectiveness by being printed in green. Among the very few portraits in evidence, "The Artist," by P. H. Richardson, was decidedly the best of the home-made kind, intelligently lighted, plastic, and sane in expression. Deserving special mention were "Among the Everlasting Hills," by F. W. Shaw; "The Gathering Storm," by E. E. Cheney; "A Country Road," by H. A. Roberts, and two prints of a youngster pretending to paint, by J. B. Kahill. Not a gum-print was in evidence.

ABOUT NON-ADVERTISERS

As PHOTO-ERA is entirely independent in its policy and attitude, it is willing to furnish information, honest and unbiased, about any firm or individual identified with the sale or manufacture of photographic goods, whether advertising in PHOTO-ERA or not. If in doubt about the integrity of any dealer, write to the Editor of PHOTO-ERA.

PHOTOGRAPHERS' ASSOCIATION OF ILLINOIS

AT this writing the Ninth Annual Convention of this association at Chicago promises to be a distinct success. We have just received a tastefully printed souvenir program containing several articles of interest to the professional and an announcement of the good things which the convention affords. Among the speakers are C. J. Van Deventer, president of the Photographers' Association of America, and George Graham Holloway, past-president of the same organization, while talks on various phases of portrait-making will be given by F. L. Cornell, C. H. Weeks, R. H. Mann and F. F. Hazlett. We hope in the next issue to give a report of this convention.

THE ANTHONY & SCOVILL COMPANY

THIS growing concern announces that it has considerably increased the facilities of its New York office by moving to 40 East 21st Street, between Broadway and Fourth Avenue. The entire second floor will be devoted to a complete stock of the firm's well-known photographic staples and specialties for the inspection of customers. A full line of Ansco cameras, Ansco films and Cyko paper will be constantly kept on hand, ready for prompt delivery, to assist dealers in quickly filling orders for these popular goods.

ARISTO SCHOOL

THE first Aristo School of Photography, held at New York April 2–5, in the building of George Murphy, Inc., 57 East 9th Street, was a decided success. During the four days and one evening session nine hundred photographers visited the rooms, inspected the lamp and saw the demonstrations, at which negatives of fine quality were produced under the Aristo lamp and enlargements were made by the Folmer & Schwing Enlarging-Camera in connection with the Aristo lamp and without the aid of condensing-lenses. There were also talks on posing, lighting, retouching and general photographic topics. Not only was the school a success as regards the demonstrations, but it was also of benefit to the visitors, and met with their decided approval.

During the exhibition the Century Camera Co.'s Studio Outfit was shown, the Folmer & Schwing Enlarging-Camera, the Percy King Light Controller, the Bausch & Lomb Unar Portrait Lens, and a large number of negatives were made with the 3A Ross Portrait Lens.

REV. THOMAS PERKINS

IT is with regret that we record the recent death of Rev. Thomas Perkins, M.A., rector of Turnworth, England, in the sixty-fifth year of a life both busy and beneficial to his fellow men. As an enthusiastic amateur photographer Mr. Perkins was a frequent contributor to the letter-press of PHOTO-ERA, *The Practical Photographer* Series and many of the English magazines; but his distinguished academic career supplied many other interests, and he is known as a writer on archæological and architectural subjects. He was the author of several books, and was, at the time of his death, writing another, to be entitled "Memorials of Old Dorset." Mr. Perkins will be greatly missed by all readers of photographic literature.

HAMMER DRY-PLATE

THE following letter from Mr. C. V. Cooper, manager of the Castilloa Rubber Plantation Co., of Portland, Ore., speaks for itself:

"PORTLAND, ORE., March 16, 1907.

"Hammer Dry-Plate Company, St. Louis, Mo.

"*Gentlemen:*— Referring to your letter of December 5 in reference to using your plates in tropical Mexico, I beg to say that I returned on March 1 from an extended trip in that country, taking with me ten dozen of your 5 x 7 extra fast plates. With the exception of four or five spoiled plates (due to my own carelessness), every exposure I made in that section resulted in a beautiful negative. This is the first time I have had such a result in the many trips I have made in that country. The plates were packed in paraffine paper both before and after exposure, brought home and developed here. This is for your information. Yours every truly,

C. V. COOPER."

ALVIN LANGDON COBURN IN BOSTON

AFTER having set the photographic world of New York by the ears with his unique collection of Coburntypes, exhibited at the Little Galleries of the Photo-Secession last April, Alvin Langdon Coburn came to Boston, displaying his masterpieces in the art-gallery of the St. Botolph Club, April 27 to May 4. A careful study of Mr. Coburn's work, shown here to excellent advantage, confirms the favorable opinion of its character expressed by the editor of PHOTO-ERA in the May issue. As was then stated, Mr. Coburn, when he left this country two years ago, was already master of the artistic and technical resources of his art, but, seeking and finding a new field for the exercise of his talents, he broadened in his artistic perceptions, met and photographed personages prominent in the artistic and literary world and, incidentally, evolved a new style of print — the Coburntype.

The display was a revelation in several ways. Mr. Coburn did not set out to record ugliness, but beauty, evidently remembering that God made Man in his own image. His work does not repel, it attracts. The artist here did not rely on weird, sensational or startling effects. There were no gallery plays. He works in an easy, natural way, and yet he manifests originality and force. He effectually disposes of the notion — prevailing in many quarters — that, as an expressive medium, photography has seen its best days, and now, *que faire?* A casual glance at Mr. Coburn's prints will convince even the most sceptical that here, fresh and unexplored fields are opened up to the photographer, but only to the chosen few; for Mr. Coburn, modest though he be, is a man of uncommon ability and, by nature and temperament, singularly fitted to follow his chosen pursuit. No ordinary photographer could produce such an array of notabilities as Mr. Coburn here presented, and such portraits! Being made under varying and often, apparently, under trying conditions of light, these portraits were obviously not uniform in treatment. This feature showed at least versatility of the artist. Among the portraits that successfully illustrated Mr. Coburn's interpretive powers was that of Rodin, whose quiet and significant mien suggested the Titan of French sculpture. Equally truthful and convincing and, if anything, more expressive, was the likeness of Bernard Shaw — a masterly exposition of vitality and force of character. Other examples of this class were the heads of Bernard Partridge, Edward Carpenter and George Meredith — which, furthermore, were superbly modeled. Another admirable characteristic of Mr. Coburn's portraits is the manifest absence of pose, the attitude of the model being, in every case, spontaneous and, at the same time, harmonious and pleasing, while bearing the unmistakable impress of the artist's individuality.

The rest of the prints — two-thirds of the collection on view — comprised open-air subjects, such as river-scenes and architectural *motifs*, which revealed the versatility of his genius. Here he exhibited an astonishing mastery of pictorial composition, chiaroscuro and tonal effects, as well as a vivid impression of space, distance and atmosphere. His sense of beauty is developed to an unusual degree. It is of the refined, poetic order, and boundless in its range of vision. These qualities were made strikingly evident in a fragment of the Bridge of St. Angelo, the massive arch rising with a majestic sweep out of the Tiber, the inevitable reflections being managed with judicious skill, so as to harmonize, rather than conflict, with the general pictorial scheme. This particular print also possessed a richness of tone and a feeling of the artist's ennobling personality that were impressive in the extreme. A composition of quiet, appealing beauty was "Paddington Canal," a spontaneous arrangement and well balanced. The depth of perspective and atmospheric effect — features which play an important part in all Mr. Coburn's outdoor subjects — helped to make this picture one of unutterable charm. But why go on, when each of the forty-eight prints contained only elements of beauty?

As to the technical character of his prints, Mr. Coburn vouchsafes little information, except that carbon tissue, gum and brains are the principal constituents. His attitude is excusable, for his printing-methods are the outcome only of exhaustive and costly experiments. In executing a certain pictorial conception, it may become necessary to make a multiple print, in which branch of the art Mr. Coburn displays rare ingenuity and taste. Sometimes he is obliged to make as many as fifteen impressions of one subject before the desired result is obtained. In that case all but the successful print are promptly destroyed. The finished prints, which approximated 11 by 14 inches in size, and appeared to be contact-impressions from direct negatives, exhibited no positive sharpness anywhere, yet were free of aberration and distortion, the pleasing softness of definition being entirely due to the character of the lenses used by him. These are of the uncorrected, so-called "semi-achromatic" type, i.e., in which the visual and chemical foci are not quite coincident. As used by Mr. Coburn, these objectives yield no plane of absolute sharpness, but rather a gentle indistinctness, which extends throughout the completed print, and this without any appreciable detriment to truth of delineation. We hope to publish one or two of Mr. Coburn's most representative pictures — a portrait and a landscape — in PHOTO-ERA in the near future.

While in Boston Mr. Coburn, equipped with an 11 x 14 apparatus — including a set of semi-achromatic lenses and a long-focus Dallmeyer-Bergheim lens — filled a number of important portrait engagements.

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MORE THAN CONVENIENCE.

The convenience of Eastman Non-Curling, daylight loading film needs no demonstration. Also its unsurpassed quality has been fully determined. Yet there still remain two features of Eastman N. C. that have done much to insure the remarkable results so easily obtained by the Kodak system of picture making. The ability to resist or avoid halation is one.

Halation is simply fog caused by the light rays reflected from the back of the emulsion support. These rays, owing to the angle of reflection, attack the sensitive emulsion at points where they are not wanted and produce a blurring of the image which forms a radiation or halo of light around it—from whence comes the term "halation".

Under many conditions, the ordinary glass dry plate will show this "halation" when N. C. film will be practically free from it.

This is the reason :

The average glass plate is nineteen or twenty times the thickness of N. C. film, so, naturally, the light rays reflected from the back of a glass plate will increase the amount of halation proportionately over that reflected from the back of the film.

In addition, the film is backed by the dull surface black paper, which absorbs a very great amount of the light that reaches the back of the film and thus reduces the halation to the minimum degree.

Practically the only halation evidenced with N. C. film is in cases where the over exposure in certain parts of the negative is so great that the light is *refracted* by the molecules in the emulsion, to such an extent as to cause a diffusion of light sufficiently strong to affect the sensitive salts.

For these reasons, it is not necessary to manufacture a double coated or specially backed film to avoid halation.

In addition to its ability to avoid halation is its orthochromatic quality—that is, its ability in a great degree to correctly afford color luminosity value and thus affording the proper tonal gradation in negatives of subjects having a variety of colors, this feature showing to excellent advantage in its ability to retain the clouds in the negative where the extremes of exposure are not excessive.

Eastman N. C. film affords you not only every advantage of the most expensive and best glass dry plates, but also the advantage of lightness, compactness and the ability to perform every operation in full daylight.

"A DARKLESS DARK ROOM."

That is what a recent convert to tank development styled the Kodak Tank Developer.

The Kodak Tank Developer is more than that—it is also an errorless dark room. It not only permits you to remain in and work in the freedom of full daylight, but absolutely prevents the occurrence of any of the mishaps liable to hand development in the ordinary dark room.

Why should a machine produce better results than those produced by human agency?

The answer is simple and conclusive.

The Kodak Tank Developer was devised for the sole purpose of eliminating the chances of error by the old method, and the principles of its construction are sound from both the scientific and mechanical standpoints. By this method it is not possible to fog the film during development because no light can penetrate to the film. The film cannot be scratched or marred because it is protected by the apron with which it is enclosed. Unskilled judgment as to duration of

development cannot lessen the chance of good results, because the time of development has been pre-determined by experts.

On every hand and at every step you are protected. If you are inexperienced, the Kodak Tank Developer supplies the experience. If expert, you appreciate the value of the tank and its automatic avoidance of error.

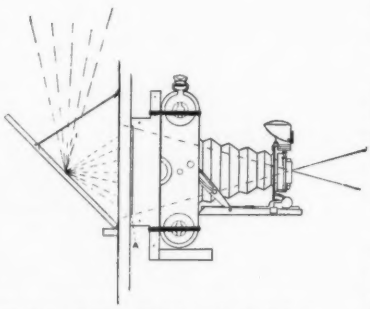
The Kodak Tank Developer is a mechanical dark room expert, never in the way and always at your service.

OF ANY SIZE.

C. H. Claudy, the well known writer and newspaper photographer, and incidentally a pocket Kodak enthusiast, has this to say in a recent number of "*The Camera.*"

"One last word to those who have started photography with a large fund of enthusiasm and a small camera.

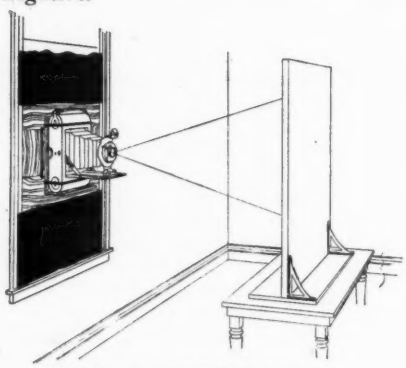
Shortly you will want to make larger pictures. You will want a large camera. Don't get it—get a lantern instead.



Shelf for holding Kodak against window.

If your present small instrument is too small for your capacities, in point of lens, shutter and adjustments, by all means get another, but still keep to the small instrument."

As a matter of fact, you can go Mr. Claudy one better. Instead of getting an enlarging lantern, you may, if you possess a No. 3, 3A, 4 or 4A F. P. K. or Cartridge Kodak, make enlargements of any size with the same little Kodak that snapped the original negative.



Method of using Kodak for enlarging.

The process is exceedingly simple, and all that is required in addition to the Kodak and a simple shelf for holding the Kodak and negative in position, is a room from which the light may be excluded, and with a window through which the light may enter without obstruction from trees or nearby buildings.

The diagrams shown herewith illustrate the method of employing the Kodak for enlarging and are taken from our booklet "Bromide Enlarging with a Kodak," which may be had gratis from any Kodak dealer or by mail from us.

Mr. Claudy is right—there is no necessity of burdening yourself with heavy and bulky apparatus and making your outings work instead of play. Instead, just slip a Kodak in your pocket, out of the way until wanted, and upon your return and at your leisure, make your pictures any size you want them with this same little Pocket Kodak.

It's *all* easy the Kodak way.

Eastman Kodak Company

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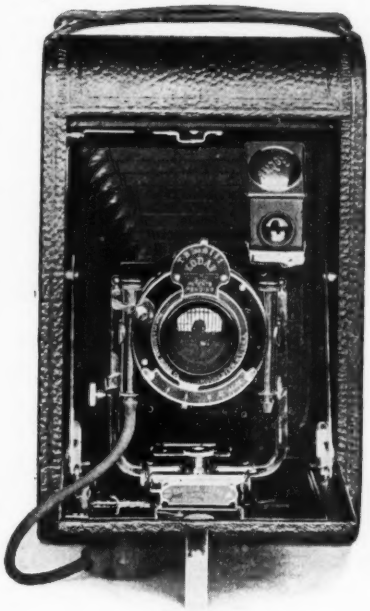

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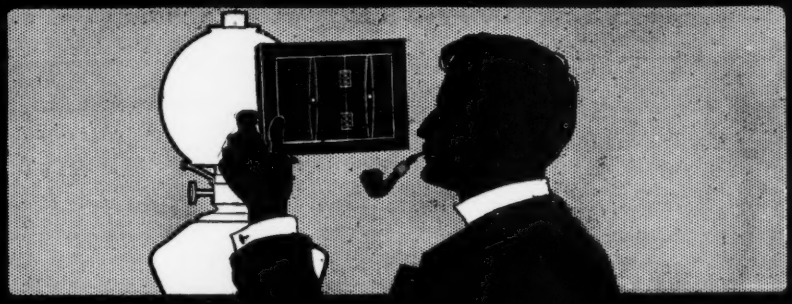

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